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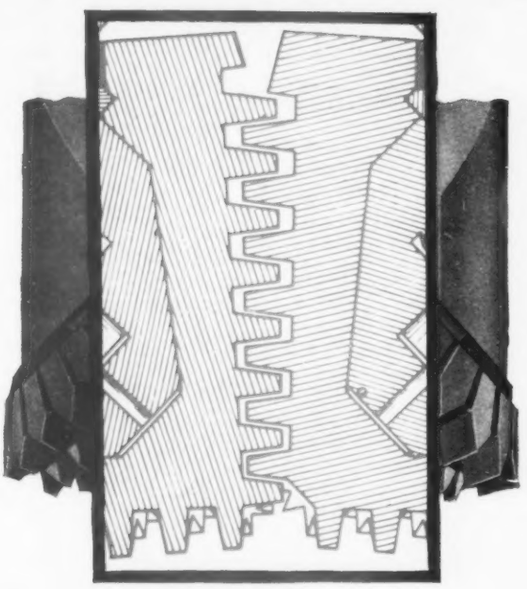
THE OIL WEEKLY

Devoted Exclusively To The Production and Transportation of Oil and Gas

Engineering News Statistics

Only



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A Patented refinement which is your assurance of Speedy Unhindered Penetration through the most difficult formations.

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February 13, 1931

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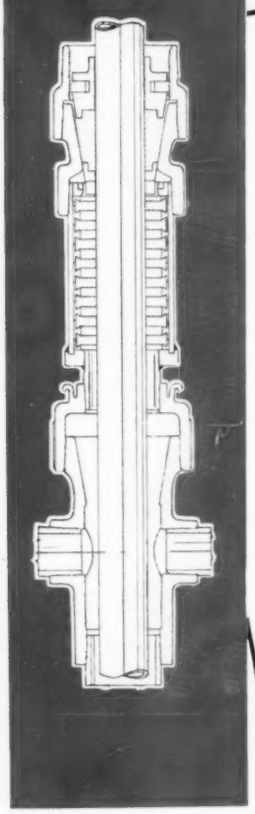
SAVE MONEY:

USE McEVOY EQUIPMENT FOR TUBING WELLS UP TO 800 POUNDS

READ THIS



Wink, Texas
January 10
1931

Mr. Kirby Smith, Sales Mgr..
J. H. McEvoy & Company.
Houston, Texas.

Dear Sir:-

Replying to your inquiry of the 8th inst., regarding the use we have made of the oil savers which we have recently purchased from you.

We have installed tubing and McEvoy Heads on four of our wells allowing them to flow only through the tubing. We have been very successful to date, and intend making the same installation on two of our other wells in the near future. One well on which these oil savers have been installed carries six hundred pounds pressure between the tubing and casing and another carries eight hundred pounds. They have proved very effective against this pressure and have met all our requirements. Needless to say, we are quite pleased with the performance of your article.

Yours very truly,

CCM-JTS

To accomplish same results by other processes costs many times more money

This letter is from the superintendent of a leading company. Name on request.

Write for Information

J. H. McEVOY & COMPANY

HOUSTON, TEXAS

PACIFIC COAST BRANCH: McEVOY SCREEN PIPE CO., 2428 E. 56 ST., LOS ANGELES, CALIF.

The OIL WEEKLY. Issued weekly by the Gulf Publishing Co., 3301 Buffalo Drive, Houston, Texas. Subscription price $1.00 per year; 15 cents per copy. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 187

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You will find Gaso Fittings unfailingly dependable. They are produced in Gaso shops under Gaso standards of workmanship — made of close-grained iron, free from imperfections, accurately machined and carefully inspected to secure unvarying uniformity.
Ask us about Gaso fittings: Gray Iron Ells and Tees—Heater Heads —Beckwith Swing Check Valves— Pipe Saddles and Clamps — Pipe Line Strainers — River Clamps — Extra Heavy Flanges—Certified Malleable Ground Joint Flange Unions.
or get quotations on special requirement fittings created in our modern pattern shop and foundry.
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for every oil industry need

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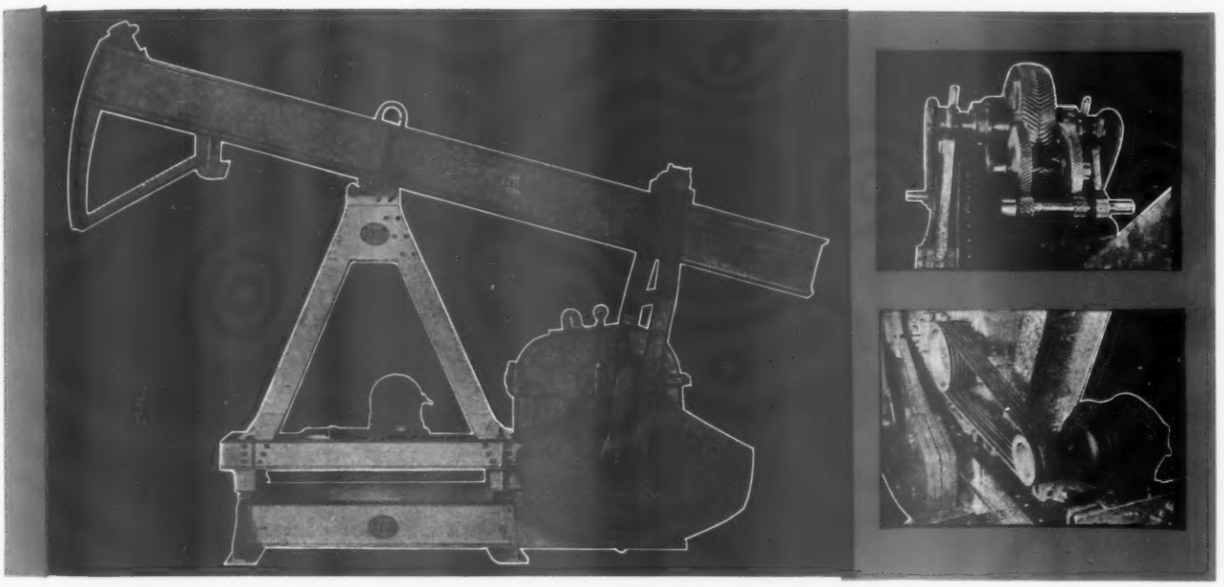
S. R. DRESSER MANUFACTURING CO.
Bradford Pennsylvania

IDECO TYPE A-3 PUMPING UNIT



Here is a complete, self contained, highly efficient pumping unit that is unequaled for pumping wells up to 3000′ in depth. It is built for installation upon the derrick floor or for mounting upon a concrete foundation.

The IDECO type A-3 Pumping unit consists of a double reduction gear unit with double Helical (Herringbone type) continuous tooth gears, driven by a motor or multicylinder gas engine through "V" belt or silent chain drive; a crankshaft with twin cranks...one on either side of the gear housing; and IDECO crank counterbalance for each crank; a double pitman; heavy duty roller pitman bearings; an "A" Frame Samson post; a solid beam type walking beam; and a mule head for straight lift pumping. All driving gears are completely enclosed and operate continuously in a bath of oil. The entire assembly is mounted as a unit upon a structural steel bed plate. The unit is complete in itself and with exception of the motor or engine requires no additional equipment.

CAPACITY

The Type A-3 Pumping Unit is suitable for the following pumping conditions when operated on a 42 inch stroke.

3000 ft. of 2" tubing with ¾" rods
2300 ft. of 2" tubing with ⅞" rods
2600 ft. of 2½" tubing with ¾" rods
2100 ft. of 2½" tubing with ⅞" rods
2200 ft. of 3" tubing with ¾" rods
1800 ft. of 3" tubing with ⅞" rods
1900 ft. of 3½" tubing with ¾" rods
1600 ft. of 3½" tubing with ⅞ rods

This unit will pump successfully at greater depths when operated on shorter strokes The pumping efficiency, however, will be reduced proportionately.

THE INTERNATIONAL DERRICK & EQUIPMENT CO.

COLUMBUS, OHIO — BEAUMONT, TEXAS — LOS ANGELES, CALIF.

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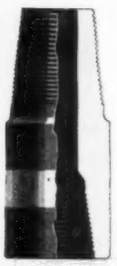
Stores and Stocks in every important oil field.

803

HYCHROME SUB

FIG. A



If it's "made by Bridgeport" you are assured of superior steel—unusual stamina—by Bridgeport's 24 years experience in the selection and treating of steels for Oil Field Tools.

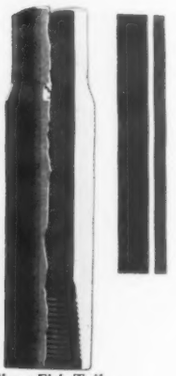


FIG. D

Short Fish Tail Drill Collar

For Superior Steel - Extra Strength

BRIDGEPORT ROTARY DRILL COLLARS AND HYCHROME SUBS

FIG. B
Long Rock Bit Drill Collar

FIG. C
Long Fish Tail Drill Collar

Special forged steel, *made to Bridgeport's own specifications.* Perfectly designed. Bridgeport's unrelenting standards of superiority: That's why BRIDGEPORT Rotary Drill Collars rank at the top in every Rotary field.

BRIDGEPORT'S ROCK BIT DRILL COLLARS

Fig. B

30′, 24′, 12′ Lengths.
Sizes, 9″, 8″ and 6¼″ O.D. for 12″, 12¼″, 11″, 8¼-8¾″ Rock Bits.

Tool joint threaded boxes on top; Tobin bronze lined friction joint boxes on bottom. Long elevator necks and top collars. Both 30′ and 24′ collars take a 20′ Lubricator.

FISH TAIL DRILL COLLARS

(Disc Bit and Drag Bit.)
Fig. C & D

12 feet long—same O.D. sizes as Bridgeport Rock Bit Collars—but have tool joint box top and bottom, and bore is smaller. Others 6 feet long—7¾″ O.D.—drill pipe tool joint connections, top and bottom.

HYCHROME ROTARY SUBS

Save Money —
Eliminate Fishing Jobs

Fig. A

Made by the famous Hychrome Process—manufactured exclusively by Bridgeport. Have tool joint boxes and rock bit pin ends and may be used to convert Bridgeport Rock Bit Collars into Fish Tail Collars (Disc Bit and Drag Bit). All special subs are made on order. Quick delivery.

COMPLETE STOCKS OF HUGHES ROCK BIT DRILL COLLARS CARRIED IN ALL BRANCHES.

Write our Home Office for descriptive literature, or get in touch with the nearest Bridgeport Branch.

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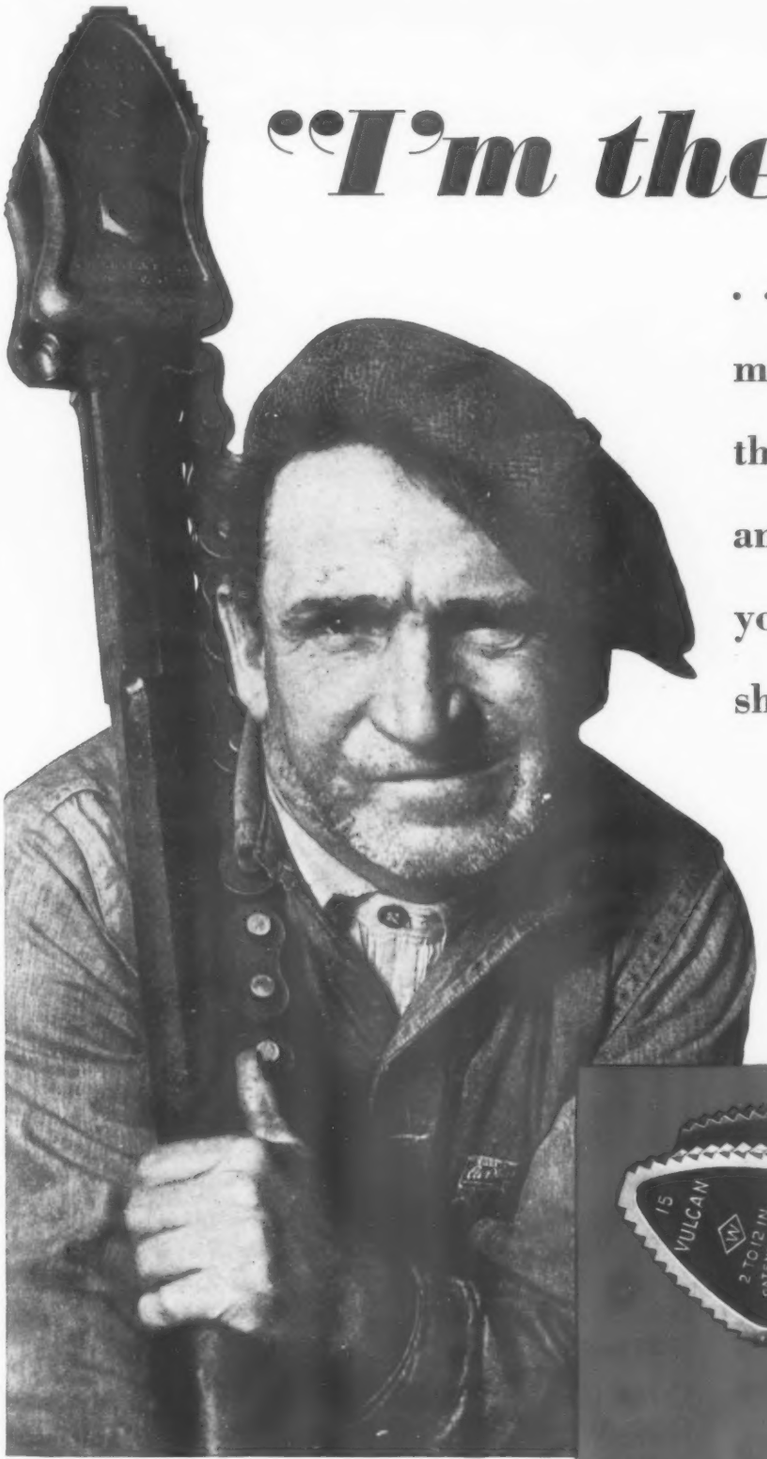
Wichita, Kansas

BRANCHES IN ALL ACTIVE OIL FIELDS IN
OKLAHOMA, TEXAS, NEW MEXICO AND KANSAS

"I'm the Bucko



. . . that wants a tool to match me hooks. Lean on the man end of a "Vulcan" and somethin' moves . . . you can bet your lousy old shirt on that!"

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CHAIN PIPE TONGS

More Williams "Vulcan" Tongs are used in Oil Country work than all other makes combined. For thirty-five years "Vulcans" have been the leaders.

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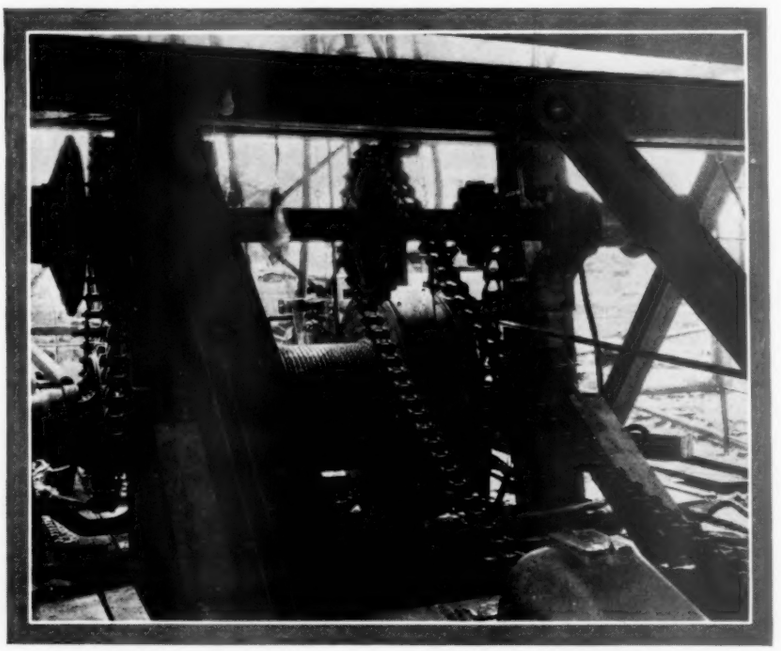

13,000 FEET AND STILL LOWERING THE COST PER FOOT OF HOLE . . . . .

On Rallen No. 1, Oklahoma City, last fall, a set of Rex Deepwell Chabelco Chains had drilled 13,000 feet and was still lowering the cost of chain per foot of hole—as the driller put it, still going strong.● Still going strong meant that: The new alloy pins were wearing, and not wearing out. Neither were they snapping off their heads under the impact of full load. Scientific heat-treating had developed smooth, hard surfaces around tough insides. ● Nor were the sidebars backing off the bushing—the hydraulic force fit connects with a nicety that holds them on. ● This chain had not pounded itself to pieces because weight is accurately determined in relation to operating load and speed. ● Meanwhile, these chains were lowering the cost of chain per foot of hole with every revolution of the sprockets. Every hour they were piling up a record of extra efficiency and extra profit that starts the minute any chain goes beyond the 10,000-foot mark in the tough drilling under heavy loads of Greater Seminole, Oklahoma City, and the hard rocks of the West Pacific Coast. The greatest chain that ever hit the oil fields did not just happen—it was engineered—steadily improved by invention from its famous forebears, the original Rex Chabelco 1030 and 1240.

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CHAIN BELT COMPANY

REX DRIVE CHAIN - REX CONSTRUCTION MACHINERY

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THE THIRD OF A SERIES, AND THE FIRST ADVERTISEMENT ON PUMP LINERS

Axelson Liners Give Longer Service Because of Scientific Foundry Practice

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Minute care and attention to detail feature each of the twenty-five foundry operations necessary in the casting of an Axelson Liner. Because each operation is of equal importance, complete co-ordination is essential.

Aluminum patterns, metal flasks, oven-baked cores used in conjunction with specially designed moulding machines combine to produce a sound and accurate casting.

Cupola ingredients are weighed and recorded, the air blast providing the correct amount of oxygen to meet chemical analysis is scientifically controlled, while the temperature of the molten metal when poured is controlled by means of optical pyrometers.

Mill cleaned, perfect castings are heat treated for six and one-half hours at automatically controlled temperatures in an all-electric recuperating furnace, removing all internal stresses and increasing their strength and ductility and maintaining uniformity.

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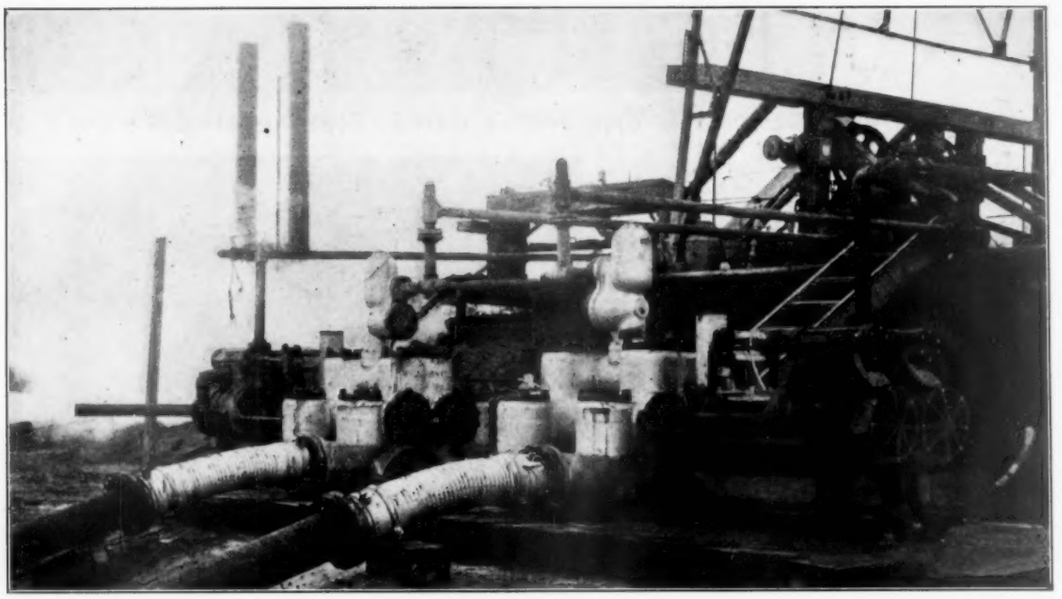

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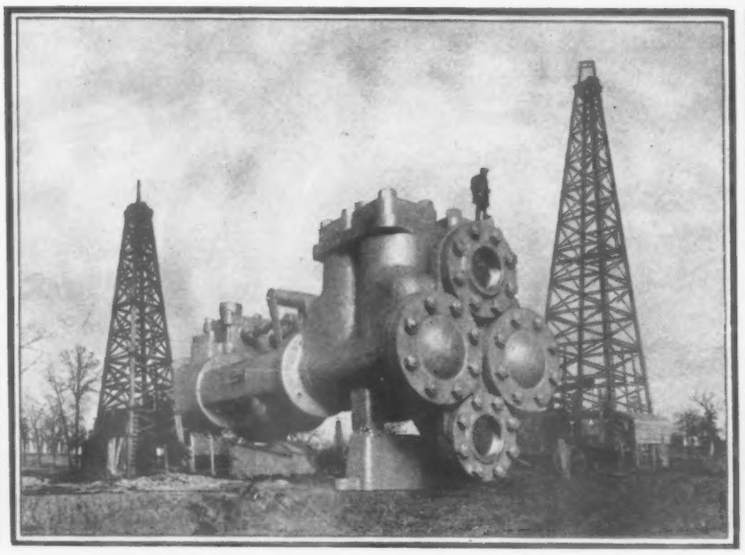

. . . . . for really big jobs★. . . .

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TRANSIT . PUMPS .

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THIS piece of bruised, crushed, worn and discarded wire rope is still working hard. If you don't believe it, just get a hack-saw and cut a strand or two. See it spring — quiver — ravel — fly apart.

This old rope's job is done, but even now, on the junk pile, it will be a long time before it can really rest. That's because of the internal stress, locked right into it at the time it was made. And it was this internal stress which prevented this rope from giving as much service, as much ton mileage, as preformed rope. Its wires and strands were constantly wasting a part of their energy in internal stress and friction.

Lay-Set Preformed Wire Rope has no internal stress. It can be cut without seizing — handled much easier — and faster — and more safely. But what is much more important, Lay-Set will give you *at least* 30 per cent more ton miles per rope.

Preforming means that every wire and strand is pre-shaped to the exact lay it must assume in the finished rope. This eliminates all internal torsional stress, thus greatly increasing wearing qualities. Send for a sample of Lay-Set by returning this coupon.

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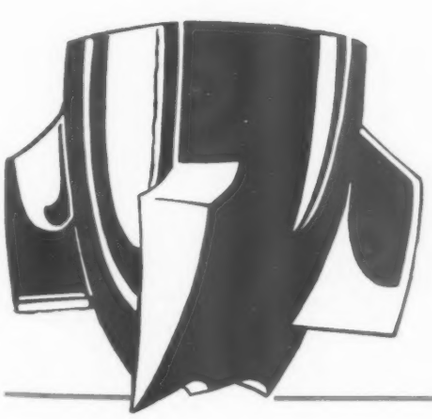
Elliott

for

PORTABLE RIGS



Elliott Core Drills are being used continually for geological tests, structural coring, water well drilling, and general post hole work.

They operate successfully with all known types of light portable rigs, and excellent recoveries are being made in loosely consolidated sands, and sticky clays and shales so frequently encountered in shallow coring.

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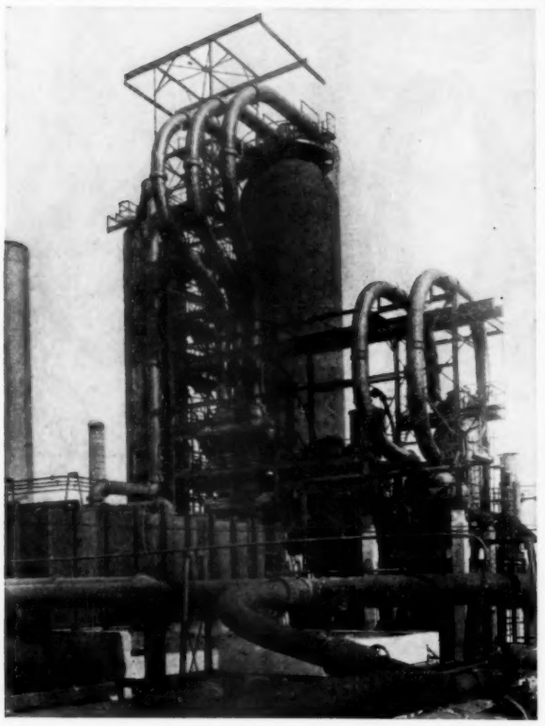

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Since 1906

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from a LOW PRESSURE WELL

There's difficulty in getting oil out of a well when gas pressure is low. Every oil company knows that. But, there is plenty action, an increase in production from between 33-1/3% to 100%, when you have installed the "greater production" Layne Milled Groove Screen, oil industry's latest, greatest, exclusive and most important invention. Leading oil companies abroad and in this country will testify to this fact. Too, this "greater production" screen has the strength to safely stand the full weight of more than 8000 feet of drill pipe, does not clog with mud and sand, and is a cushion against "cutting" high pressure.

Write, wire or phone for quick service or any further information.

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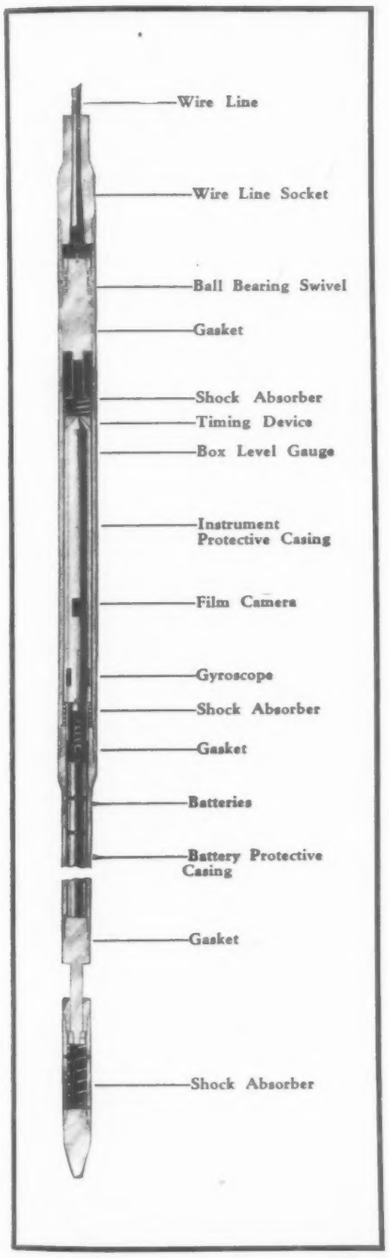

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With the aid of the gyroscope we have been able to make an instrument which will not only accurately tell the degree of deviation in drilling but will exactly tell the direction of such deviation. No producer needs to be told how invaluable to him such a surveying service can become.

The Surwel Gyroscopic Clinograph has been subjected to exhaustive field tests over a three year period. The service is now available to operators in making complete and accurate surveys of wells or bore holes in the shortest space of time. Write for literature.

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SURWEL Service Truck Unit. Complete and self-contained on Service truck even including dark room for development of film.

FOR PERFECT PERFORMANCE

"Clang!" The sharp clap of the bell sends the fighters bounding lightly to the center of the ring and into the white glare of the calciums which highlight the ripple and slide of iron muscles. A roar of approval rolls up over the billowing tiers of spectators as the fighters clash in a whirlwind of lightning feints and shifts, of stinging jabs and jolting blows. The thud and smack of leather against tight, pink flesh is music to the fight fans' ears. Two fighting machines tuned to the minute, boring in—socking, blocking—absorbing and inflicting terrific punishment in a flashing exchange of numbing blows—that's a sight that sends the red blood of he men racing, holding them awed and enthralled. They'll tell you in enthusiastically profane admiration that "There IS one, sweet battle! Boy, it's a wow! A PERFECT performance!"

Do you enjoy a good fight—a perfect performance? We'll bet you do.

We know another fighter whose perfect performance will arouse you to a profane jubilance at the way he bores in toe to toe with his antagonist and licks him calmly, swiftly, cleanly. He's known as the American Fish Tail Bit.

The American Fish Tail Bit is a new, better kind of rotary drilling bit that will give you a perfect performance by making more hole on every run, by reducing round trips by 50%, by keeping the pipe in the hole, by reducing labor and expense, by speeding up production. We'll leave it to you if that isn't a perfect performance of a champion!

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Faster in Operation » »
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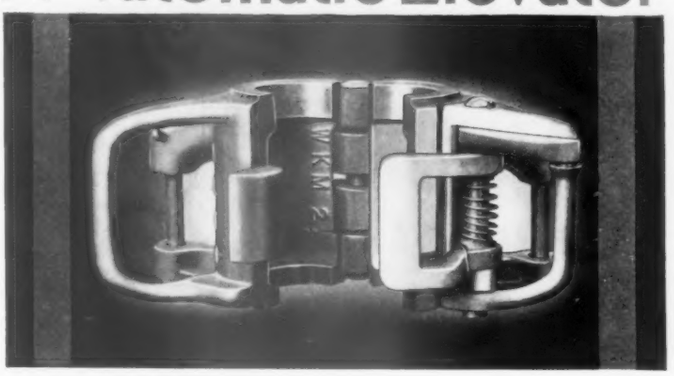

Showing position of the operator in opening the elevator. A push with the hand, and the trick is done!

How It Operates

This sure-snap, smooth-working elevator is a genuine time- and injury-saver. A push of the hand against the big, man-size handle—and plop!—the elevator is open! Equally automatic is the closing: you draw the handles together and the latch snaps shut by spring action.

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These new W-K-M *Full-Automatic* Elevators have created a sensation in the oil fields—with their new locking and releasing device, their large, convenient handles, counter-sunk retaining pins, rugged, durable latches, electro-plated castings, and . . . most of all . . . the amazing *speed* with which they can be operated!

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SPENCER W. ROBINSON, EDITOR

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Tariff Commission Report Shows Imported Oil Costs Less

Senator Capper's Bill limiting imports of all oils to sixteen million barrels gets committee approval

WASHINGTON, D. C.—The cost of delivering domestic crude oil at refineries on the Atlantic seaboard is more than $1 per barrel greater than the cost of delivering South American oil at the same points, it is shown by a report submitted to congress February 7 by the United States Tariff Commission, embodying the results of an investigation undertaken as directed by Section 332 (f) of the Tariff Act of 1930.

The report submitted was a lengthy document, going fully into the costs of producing oil in the Mid-Continent field and at Lake Maracaibo, Venezuela. The instructions given in the tariff act, it is declared, are subject to more than one interpretation, and the various possible interpretations are fully discussed in the body of the report.

Summarizing the results of its investigation, the commission reported that the average cost of production of crude petroleum at the well, for 1927, 1928 and 1929, in Oklahoma, Texas, Arkansas, Kansas, Louisiana and New Mexico, from which states is obtained the great bulk of the domestic oil refined along the Atlantic seaboard, was $1.10. The cost of transporting this oil to the Atlantic seaboard was $0.88, including pipe line charges to Gulf ports, a purchasing charge of 10 cents per barrel, and tanker charges from Gulf ports to the Atlantic seaboard. The total cost of the oil delivered at Atlantic seaboard was, therefore, $1.98 per barrel. This cost is computed on the basis of "company interest oil"—i.e., royalty oil has not been included in total production—and includes interest at six per cent on the investment of the companies.

The cost of production of oil in the Maracaibo Basin of Venezuela, in 1929 (Section 332 (f) calls for "present" cost and 1929 is the latest year for which costs were available) was $0.56 at the point of transfer to ocean tankers. Transportation and other charges necessary to deliver the oil to the Atlantic seaboard were $0.23, making a total of $0.79, cost delivered at Atlantic seaboard refineries. This figure also is computed on the basis of company interest oil and includes interest at six per cent on the investment of the companies.

The commission has made additional comparisons of the domestic and Venezuelan costs, on bases which might be indicated by other interpretations of Section 332 (f). For example, it has compared the three-year weighted average cost in the United States and in the Maracaibo Basin, Venezuela. On this basis the domestic delivered cost is $1.98, the same figure as that used above, while the Venezuelan is $0.89, made up as follows: Cost at the point of transfer to ocean tankers, $0.65; transportation and other charges, $0.24.

Delivered Costs Determined

"Delivered cost to the Atlantic seaboard refineries" might also be interpreted as meaning the delivered prices which the refiners pay, since the price paid for crude oil by those who purchase in the open market is tantamount to the cost to them. The commission, therefore, ascertained not only cost at the well plus transportation and other charges to the Atlantic seaboard, as summarized above, but also the delivered prices paid for both domestic oil from all fields and oil from the Maracaibo Basin, Venezuela. The three-year (1927-1929) weighted average price paid for domestic crude from the Mid-Continent-Gulf area by the Atlantic seaboard refiners was $2.06 and for the Venezuelan crude $1.10. The price paid in 1929 for domestic crude from the Mid-Continent-Gulf area was $2.03 and for Venezuelan crude $1.02.

It is necessary to point out that in comparing the costs of domestic and Venezuelan crudes, articles are being compared which are not similar. The domestic crude, from the Mid-Continent and adjacent areas, the cost of which is here compared with the Venezuelan crude, had an average gravity of approximately 33 degrees, Baume scale, while

the foreign had a gravity of 18 to 19 degrees. The domestic crude refined along the Atlantic seaboard during the period covered yielded, largely by cracking processes, 36 to 44 per cent of gasoline, while the Venezuelan yielded nine to 12 per cent gasoline and 75 to 83 per cent of fuel oil. Gasoline has a much higher unit value than fuel oil.

Qualities Unalike

The difference in quality of domestic as compared with Venezuelan crude is reflected in the wide difference in the price paid by the Atlantic coast refineries. The commission has also ascertained the value of the product derived from the two kinds of crude petroleum by the Atlantic coast refineries during each year. In 1929 the value of the products obtained from the domestic crude used was $2.97 per barrel, and from the Venezuelan crude, $1.15 per barrel. There is, however, a decided difference in the costs of refining, the average expenditure per barrel for refining processes being much higher in the case of the domestic than of the Venezuelan crude. The average costs of refining were not, however, ascertained, so that the respective values of the products of the crude over and above refining costs could not be determined.

The commission has ascertained the cost of production and sales value of crude petroleum in all the other principal producing regions in the United States, as well as in the Mid-Continent-Gulf area. The costs of production of the domestic crude have been tabulated in several different ways in order to afford as much information as possible on various phases of the industry. Costs have been tabulated by large and small companies, by states and groups of states, by fields, by cost groups, and by gravities of the oil produced.

In addition to the costs of production on different bases, considerable general information is given in the report on various phases of oil production in both the United States and Venezuela, and full statistical data are shown on production, imports, exports, stocks, prices, and other aspects of the petroleum situation.

Senate Commerce Committee Approves Capper Oil Bill

Washington, D. C.—A favorable report on the bill introduced by Senator Capper of Kansas, to limit the importation of crude oil and petroleum products was ordered by the senate commerce committee February 5 by a vote of nine to six.

Under the bill the importation of crude oil would be limited during 1931, 1932 and 1933 to 16,000,000 barrels a year, while imports of refined products would be prohibited for the entire period, as would crude petroleum blended with any refined product.

In its report to the senate, the committee pointed out that the act attempts to control importation for only a brief period. "The brief period of control, it is believed," it was declared, "will enable us to determine its possibilities and act accordingly. The logic of the control of importations apparently is irrefutable. In the United States today there are in the great oil producing states what are termed 'proration' laws, by virtue of which the production of oil is regulated and controlled. These proration laws in different states preclude production except as directed. The strange spectacle is presented, therefore, of controlling and limiting within our own country the production of oil, and then permitting the importation in unlimited quantities of oil from foreign countries.

"The largest amounts of importations are from Venezuela, the Dutch East Indies and Mexico. The producers in our own country," it is declared, "are told exactly how much they may produce and, in fact, are limited to a mere minor fraction of their capacity for production; and yet a powerful or rich oil company producing oil in a foreign country may itself import oil and its by-products without restriction or limitation. The bill now reported in small degree seeks to correct this inequality and injustice. The committee believes that if Americans within the limits of the United States are to be restricted in their production, that no logical reason can be presented why one who is rich enough or fortunate enough to own oil lands and produce oil in other countries should not in like fashion be restricted in his importations into the United States.

"The story of distress in the oil fields is akin to that of the drought area. The distress workers, their absolute want, their unemployment without fault on their part, all cry for such legitimate relief as may be extended by the congress. The measure presented attempts this, and while it may not afford the fullest possible remedy, the majority of the commerce committee approve it as according some relief, and as an endeavor to do tardy justice to our own people."

Oklahoma Curtailment Law Upheld by Federal Court

Oklahoma City.—In denying the petition for temporary injunction to restrain the Oklahoma Corporation Commission from enforcing proration orders, two of the three federal judges held the statute under which proration is enforced in Oklahoma not to be an interference with interstate commerce.

The decision came out of a petition of Champlin Refining Company et al against the state authority. This case was originally filed as an attack on the constitutionality of the Oklahoma statute. The federal judges held the statute constitutional in a decision last September 30. Then the petition was amended to bring in the question of interference with interstate commerce, as well as the question of the reasonableness of the proration orders.

Later Marco Oil Company, Century Petroleum Company, Oils, Inc., and others joined in the petition. The court then heard testimony jointly for all the petitioners.

The decision handed down Monday of this week was approved by Judges Cottrell and Williams, while Judge Kennemar dissented on the question of interference with interstate commerce.

Attorneys for the petitioners indicated that no appeal would be taken at this time, although it was intimated that such action might be taken following action of the Oklahoma Corporation Commission on the petition to increase production of the Oklahoma City pool, or following some action by the Oklahoma legislature.

The Oklahoma statute under which proration orders are written, now has been held constitutional by the Oklahoma Supreme Court, as well as by a federal district court, with three judges sitting.

▼ ▼ THE WEEK'S NEWS ▼ ▼

Oklahoma Committee Suggests Change in Conservation Law

Oklahoma City.—Work of the special investigating committee appointed by Governor William H. Murray, evidently will not result in recommendations of legislative nature, since the Oklahoma executive has branded the majority report of the committee as without definite recommendations. Comment by the governor was:

"I have not read the report completely but I have read enough to convince me the committee conscientiously and with painstaking effort endeavored to make compromise in their mutual interests."

Those who signed the majority report, however, have countered with statements that they do make specific recommendations. The majority report sets out that the Oklahoma conservation statute of 1915 is:

1. Primarily a plan of fixing and maintaining a price for crude oil.
2. Gives legal sanction to trade agreements.
3. Draws its support largely from the large major units.
4. That proration and conservation must be distinguished.
5. That oil and gas resources can be conserved under a true conservation measure.
6. That Oklahoma producers have steadily lost their market under proration.
7. That no state or foreign country has law comparable in its price-fixing features with Oklahoma.
8. That there is a marked identity of interest and of advocacy for free imports and for proration of the Oklahoma oil.
9. That the experiment of proration has cost the state of Oklahoma $6,000,000 in revenues.
10. That great physical loss of irreplaceable natural resources has been sustained.
11. That by basing market demand on nominations of pipe line companies, proration orders have been the efficient agent of special, private interests.
12. That pending a remedy the taking of potential should be subjected to disinterested survey of someone appointed by the governor.
13. That the whole plan of proration is entrusted to agents paid and representing oil concerns which are most interested in the others to be made.

Suggest Law Like Texas

The definite recommendation of the committee to the effect that Oklahoma should have statutes modeled after the conservation laws of Texas. That part of the report dealing with specific recommendations follows:

"Fixing so-called 'conservation' act of 1915, and the enactment of a true conservation measure modeled on the law of Texas. The waste provision of the Texas statute reads:

"Article 6014. Waste—Neither natural gas nor crude petroleum shall be produced, transported, stored or used in such manner or under such conditions as to constitute waste; provided, however, this shall not be construed to mean economic waste; the term 'waste' in addition to its ordinary meaning, shall include permitting (a) escape into the open air of natural gas except as may be necessary in the drilling or operation of a well; (b) drowning with water of any stratum capable of producing oil or gas, or both oil and gas, in paying quantities; (c) underground waste;

(*Continued on page 59*)

Court Decree Allowing Socony-Vacuum Merger to be Appealed

St. Louis, Mo.—Proposed merger of Standard Oil Company of New York and Vacuum Oil Company will be passed to the United States Supreme Court if expected appeal is taken by the government from a decision by three federal judges here February 7, approving the consolidation. The decision held that the consolidation of these two units of the old Standard Oil group would not violate the decree which dissolved that alliance in 1911. The court held that it was not shown that it was the intention of the two companies to form a combination in restraint of trade, and held that the merging would not be a violation of the Sherman anti-trust law. No domination of the industry is threatened, it was pointed out, as the merged company would not be so large as the present Standard Oil Company of New Jersey, probably second to it, third or fourth in financial strength in this country, sixth in crude production and fourth or fifth in refining capacity.

Plans for the merger made by directors of the two companies and now passed upon by the St. Louis court, contemplates formation of a holding company, the two companies to continue their respective names and trade names, with little change in their domestic operations. Principal advantage hoped for is in foreign markets where both companies are important and where their mutual interest would be furthered by joint operation.

Magnolia to Take Over Vacuum Production Following Merger

Dallas, Texas.—Approval of the merger of Vacuum Oil Company with Standard Oil Company of New York by three judges of the United States Circuit Court of Appeals in St. Louis February 7 will result in the Magnolia Petroleum Company being assigned the producing properties and leases held by Vacuum Oil Company in the Southwest. Anticipation of a favorable court decision has brought about in recent months a close contact between Magnolia Petroleum Company and Vacuum Oil Company in supplying crude for the latter's refineries.

Magnolia Petroleum Company succeeded Prairie Oil & Gas Company late in 1930 as source of supply for approximately 7500 barrels of Ranger bright stock crude, or its equivalent, daily consumed by refineries of Vacuum Oil Company. Magnolia Pipe Line Company rebuilt 60 miles of eight-inch welded line from Depew station to the Burbank field, Oklahoma, last September to perform common carrier crude service for Vacuum Oil Company, which had previously bought a large amount of Burbank stored oil and contracted for daily deliveries from Phillips Petroleum Company.

Vacuum Oil Company has two small flowing oil wells in Lea County, New Mexico. The company has a small amount of high gravity oil production on an isolated property in Runnels County, West Texas, while several jointly owned oil properties in Eastland and Coleman Counties are conveniently located to be absorbed by Magnolia Petroleum Company.

Start Movement of Gasoline Through Great Lakes Line

TUESDAY, January 27, marked the beginning of a new era in the transportation of refined products and initiated one of the greatest co-operative transportation ventures ever engaged in by major petroleum organizations. Gasoline was turned into the first section of Great Lakes Pipe Line Company's line at the Ponca City refinery of Continental Oil Company to be joined at Barnsdall by gasoline from the refinery of Barnsdall Oil Corporation and transported to the Kansas City terminal of Great Lakes Pipe Line Company. When completed the system will carry gasoline from the plants of six major companies in the Mid-Continent area to be marketed in Kansas City, Omaha, Des Moines, Minneapolis-St. Paul, Chicago and Milwaukee.

Great Lakes Pipe Line Company had its beginning in the late summer of 1930 when Continental Oil Company and Barnsdall Oil Corporation outlined plans for a carrier which would transport refined gasoline from Oklahoma refineries to the markets of the Great Lakes and mid-western regions. The plan attracted the interest of other refiners and today the ownership is vested in six companies; Continental Oil Company, Barnsdall Oil Corporation, Mid-Continent Petroleum Corporation, Skelly Oil Company, Pure Oil Company, and Phillips Petroleum Company. Permanent headquarters for the company were established in the Fairfax Airport building, Kansas City, on January 31, at which time all office equipment and personnel were moved from Ponca City.

Pump stations at Muskogee, Okmulgee, West Tulsa, Barnsdall, Ponca City, Independence, Humboldt, Paola, Kansas City, and Ridgeway are under construction and scheduled for completion between February 1, and March 1. Work should begin on the remaining stations early in February. Upon completion the entire Great Lakes system will have a line capacity of 300,000 barrels and total storage capacity of 1,300,000 barrels. A boiler plant, Ethyl blending plant, one 35,000-barrel, four 25,000-barrel, and one 80,000-barrel, tanks will be included in the terminal equipment. Marine loading equipment on the Missouri river and a loading rack for trucks will be added in the future. A complete communication system including telegraph, telephone, and teletype facilities will radiate from Kansas City to all points along the line.

The company announced, effective February 2, the first of a series of gasoline pipe line tariffs covering the shipment of gasoline from Ponca City and Barnsdall to Fairfax terminal at Kansas City and for traffic to be shipped beyond the terminal by rail. Other tariffs will be added from time to time as new sections of the system are completed. Considerable interest has been manifested in the basis upon which tariff would be computed and as to how the pipe line rates would compare with all-rail rates. The following comparison bears out the company's statement that its tariff has not been designed to break down the all-rail rates:

Destination	Pipe line rate to Fairfax terminal cent per gallon	Rail rate from Fairfax terminal cents per gallon	Combination rate-cents per gallon	All-rail rate-cents per gallon
St. Louis, Mo.	.52	1.45	1.97	1.98
Jefferson City	.67	1.29	1.96	1.98
St. Joseph, Mo.	.79	.86	1.65	1.68
Sabetha, Kansas	.95	1.22	2.17	2.18
Fall City, Mo.	.79	1.39	2.18	2.18
Beatrice, Neb.	.60	1.58	2.18	2.18

Above rates apply to tender shipments of gasoline from Ponca City and Barnsdall on a movement of at least 50,000 barrels from one consignor to one consignee, to be delivered at one point or several points along the line.

STATUS OF GREAT LAKES PIPE LINE COMPANY'S GASOLINE LINE FEBRUARY, 1931

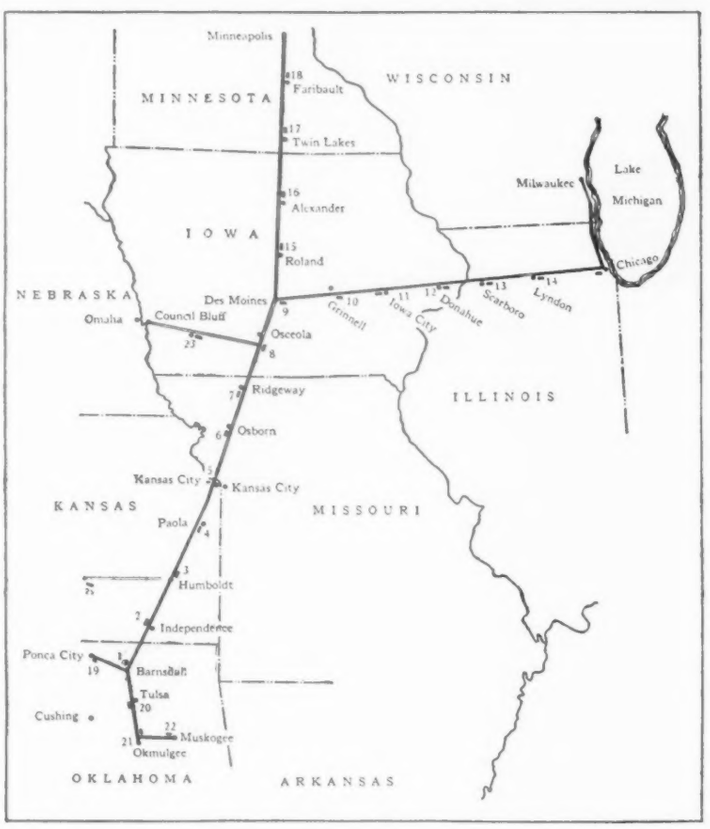
Section of Line—	Size Inches	Length Miles	Constructed by	Status
Ponca City to Barnsdall.....	6	53	Sheehan Pipe Line Construction Company	in operation
Barnsdall to Kansas City...	8	216.5	Sheehan Pipe Line Construction Company	in operation
Kansas City to Des Moines..	8	198.5	Natural Gas Engineering Company	134 miles completed. Mo. River crossings completed (three 8-inch lines).
Des Moines to Minneapolis-St. Paul	6	261	William Schmit	190 miles completed
Des Moines to west bank Mississippi River	6	195	Cater Construction Company	Completed. River crossing completed by Seybolt-Mitchell Construction Co.
East bank Mississippi River to Chicago	6	142	Seybolt-Mitchell Construction Company	Not started
Chicago to Milwaukee.....	4	90		Not started
Omaha spur	4	115		Not started
Barnsdall to Okmulgee.....	6&8	65	Southwestern Construction Company	About 25 miles completed
Okmulgee to Muskogee.....	4	32	Southwestern Construction Company	
El Dorado spur.....	4	70		Not started

When Gasoline Started Through the Great Lakes Pipe Line

When the first gasoline began its journey through the completed section of the Great Lakes Pipe Line Company line between Panca City and Barnsdall, Oklahoma, and Kansas City, on January 27, Great Lakes Company officials were on hand to open the valves at the Ponca City pump station. The two men at the controls are Harry Moreland, vice president and general manager, left; and F. E. Richardson, chief engineer. The men watching the operation are, from left to right: P. A. Ward, secretary and treasurer, Great Lakes Company; A. L. Struven, construction manager for the Arthur G. McKee Company, engineers and contractors of Cleveland; M. P. Wolfe, industrial sales manager, Winton Engine Corporation, Cleveland; Henry Neff, assistant to the chief engineer, Great Lakes Company; John Grimmett, Great Lakes pilot; A. J. Purinton, chief construction supervisor, Great Lakes Company, and R. A. Rosborough, construction engineer, Great Lakes Company.

A portion of the Great Lakes pump station and the refinery tank farm of Continental Oil Company at Ponca City can be seen in the background.

Below: Recent map showing Great Lakes Pipe Line Company progress. The heavy black lines along the right-of-way indicate the portions already completed. The black dots are pump station locations



Benefits From Proration
Of Pipe Line Outlets
In Flush Fields

By W. L. TODD
Vice-President, Simms Oil Company

SIMMS Oil Company, through its leases in the Yates pool, Pecos County, Texas, has been afforded the opportunity of carefully following up the benefits to be derived from systematic and impartial proration.

W. L. Todd

Originally the rights of the operators and royalty holders were quickly defined under the old method of rapid competitive drilling and producing, consequently, it was the objective of proration agreements that they be drawn up so as to maintain the same production ratio between the several properties in the field that would be obtained were there no restriction of the rate of production. This principle is still dominant in proration theory. It is apparent and of the utmost importance that proration plans be devised so as to permit an operator to develop his leases with fewer wells than were formerly drilled, or at least to develop the leases at a slower rate.

Data compiled by Simms Oil Company showing results obtained clearly indicate the advantages and savings to be derived in flush fields through prorated pipe line outlet.

A review of the development of the Yates plan will be instructive. The field was first prorated on a straight, well-potential basis. This scheme seemed feasible while there were few wells in the field, but it invited the several oprators to drill rapidly to increase their total potential and thereby their relative participation in the field outlet. It soon became apparent that under this plan the capital expenditure would rapidly mount to the point where the relative rate of return on capital outlay would be negligible. After three months the plan was changed to an acreage basis on the theory that this would remove the incentive for further drilling. A geologist was employed by the proration committee to define the productive and potentially productive area of the field. All operators participated in the pipe line outlet in the ratio that their acreage held within the line defining the productive area of the field to the total acreage within that line. This removed the incentive for further drilling except on leases that lay outside the agreed productive limit where considerable drilling was done in an effort to extend this limit and thus bring more acreage into participation.

The porosity and permeability of the productive lime varied greatly and with them the productive capacity of the wells. Much opposition to the plan developed on the part of several operators whose wells had a far greater productive capacity than the average for the field. Some arbitrary adjustments were made to compensate for this.

Other difficulties developed under this plan. Several leases near the crest of the structure were extensively drilled. The owners of these leases held other undrilled tracts nearer the edge of the field, but within the agreed limit of production. Under this proration plan, oil allocated to these operators for this marginal acreage was withdrawn from the leases at the top of the structure. This set up unduly rapid withdrawals in this area of intensive production and excessive drainage on leases lying down dip from this area. Difficulties with the royalty owners also developed.

Difficulties Met

All of this was clearly inequitable and it brought about the idea that in order not to compel the drilling of additional wells, the leases of the operators should be divided into 100-acre units and use the average potential of all wells on the unit as the potential of the unit. Thus one well would bring a unit into participation ratably with units that had more wells, whereas an operator would be free to drill other wells on the unit if he believed that he could raise the average potential by so doing.

A compromise was agreed to, under which 25 per cent of the outlet was prorated on acreage and 75 per cent on average potential. This acreage allowance is sufficient to justify the operation of such units as have a potential so low that their outlet on potential allowance would be insufficient for profitable operation.

If this present existing plan had been adopted in the beginning it would have saved the expenditure of hundreds of thousands of dollars in the drilling of wells that did not and could not increase an operators prorata part of the pipe line outlet. In our own case, as we were removed some little distance from the intensively developed area, we drilled only three wells more than would have been necessary under the present plan. But that caused the unnecessary expenditure of approximately $50,000.00 from which we have possibly derived no benefit. But, as our lease comprises some 400-acres and under the old order of unrestricted drilling it might be expected that a well would be necessary to every 10 acres to properly protect your lease from offset wells and whereas we have drilled only seven wells during its productive life of more than three years, we feel we have been greatly compensated through our participation in proration.

The figures quoted below very impressively disclose this fact.

Our first well was completed September 25, 1927. The seventh and last well was completed July 10, 1928, a period sufficiently long to permit orderly and economical development.

As of November 30, 1930, the lease had produced 6,027,496

(*Continued on page* 48)

Proper Practice *for* Handling Various Cementing Jobs

By H. T. RAKESTRAW, *Gypsy Oil Company*
and
C. P. PARSONS, *Halliburton Oil Well Cementing Company*

1. Cementing water strings

Next to the actual finding of the oil itself, the proper exclusion of water from the oil-bearing sands is possibly the most important feature of oil producing. The exclusion of water is largely dependent upon the effectiveness of the cement job on the water string, making this one of the most important phases of the drilling of the well and conservation in general. The great depths to which we are now drilling wells, and the large amount of open hole which we are now casing with single strings of pipe are factors which are rapidly bringing up greatly increased collapsing strains on the casing. It is, therefore, necessary that the cement which we put behind our casing not only shuts off the water, but also be sufficiently strong and have sufficient height to protect the pipe from the tremendous collapsing pressure to which it is subjected. The fact that water has been excluded is not sufficient.

True, we have no means of checking the cement column behind the pipe, but we do know, however, that good cement which has been carefully mixed and placed will give the casing better protection than poor cement, uniform mixing, or both. Therefore, it is essential that the following precautions be taken in any cementing job, and this will necessitate adequate supervision in the first place.

(a) The cement shall be fresh and of good quality, regardless of the type used. Any lumpy cement should be discarded.

(b) The hole should be in good condition to receive the cement.

(c) The surface equipment should be in first-class condition, so that no time be lost during the cementing process in making repairs.

(d) An adequate number of men should be provided to handle the job with the greatest possible dispatch.

(e) The cement should be uniformly mixed with the lowest water-cement ratio practical for the particular job at hand.

(f) Accelerator, if used, should be distributed evenly throughout the portion of the mix where used.

(g) The cement should be placed and the job completed with the greatest speed possible.

Casing may be set by a rotary rig or cable tool rig. Since somewhat different conditions are encountered on each, they will be considered separately.

A. Rotary holes.—The cementing of water strings in rotary holes is the most efficient of all cementing jobs, especially from a mechanical standpoint. A rotary rig has machinery which will handle its part of the cementing work with speed and accuracy, which is not possible with cable tools. In the Oklahoma City field, for example, 5500 feet of nine-inch pipe is cemented with 1200 to 1500 sacks of cement in between one and 1½ hours.

The chief considerations in rotary jobs are the condition of the hole and the condition of the mud; the condition of the hole depending largely upon the condition of the mud. All of this should be considered and provided for, as the predetermined casing point is approached. The mud should be free from sand and shale, and as low a specific gravity as is practical. The United States Bureau of Mines has found, by experience and experiment, that the heavier the mud the more difficult it is to completely displace the mud with cement without contaminating the cement, and without danger of channeling. This is, of course, easily accounted for, because the closer two fluids approach each other in specific gravity, the easier they are to mix. The Bureau of Mines recommends that where the mud has a weight greater than 10 pounds per gallon a slug of water be pumped ahead of the cement to wash the heavy mud from around the casing. This will doubtless cause some dilution of the cement slurry, but since the diluted part of the cement will come at the top of the column no harm will be done.

The most satisfactory and almost universally used method of cementing casing in rotary holes is the two-plug method. For following and locating the position of the cement in the hole the Halliburton measuring device is more satisfactory than a displacement method. Should there by any chance be a major leak in the casing, the plug, or plugs, will stop immediately below the leak, the corrected depth being indicated by the measuring device. This, incidentally is the major advantage of the measured plug over a displacement method. In case of such a leak, the most practical thing to do is to pump out the cement and pull the pipe.

Before running the cement it is necessary to circulate the hole thoroughly. The time necessary for circulation will depend upon the amount of cavings found in the bottom of the hole. If the hole is found to be clean, it is only necessary to establish good circulation and run the cement. If a considerable amount of cavings be found on bottom, it is necessary to pump them completely out to below the point where the casing is to be cemented. It is then advisable to circulate for sufficient time to provide

The accompanying discussion of methods of cementing has been taken from a more complete paper presented by the authors before the Mid-Continent Section of the American Institute of Mining and Metallurgical Engineers, Tulsa, January 26.

The original paper entitled "Cementing" was divided into three chapters including: Cementing Practice, Methods of Cementing and Types of Cementing Jobs and Adaptable Cementing Methods. The accompanying material comprises the third chapter. The second chapter appeared in the February issue of The Oil Weekly.

for complete removal of the cavings from the hole. Circulation should in any case be maintained until everything is in readiness to run the cement.

If the mud is heavier than 10 pounds per gallon, it is advisable to run a small slug of water ahead of the cement, preferably ahead of the bottom plug. After the bottom plug is put in the casing the cement is mixed and pumped into the hole, taking precautions that the mix be as uniform as possible, and the accelerator, where used, be evenly distributed.

The top plug is then started in on top of the cement. If the mud is very heavy, it is advisable, where a measuring device is used, to pump a small slug of water on top of the top plug to allow more freedom for the measuring weight. The progress of the plug should be closely watched by the measuring line, if that device is used, or by carefully checking the displacing fluid, where that method is used.

There is still some question as to how much cement should be left in the pipe at the conclusion of a cementing job. This should be based upon the experience of the operator. Since cement is easily drilled out, and since the laitance, or washed cement is on top of the cement column, it is far better to have more cement than absolutely necessary in the pipe than to risk having a poor job right at the casing shoe. A reasonably safe amount of cement to leave in the casing would be 10 feet for every 1000 feet of casing.

Where there is but a short distance between the water and the oil formations the danger of channeling must be considered, especially where the hole is slightly crooked. It is certain that the casing will lie to the low side of the hole, and, therefore, will get little or no cement around it. It is possibly a wise precaution to enlarge the hole by means of a rotary underreamer where such a condition exists. This should cut away the wall on the low side, where the hole is sloping, permitting the cement to completely surround the casing. There is also the added advantage that a greater amount of cement can be placed where it is needed most.

B. Cable tool holes.—The usual method of cementing casing in cable tool holes is the same as on a rotary job, being the plug method. However, it is often more expedient to use some other method.

When using plugs, the procedure with cable tools is the same as with rotary work, and the same precautions should be taken. The chief advantage on a cable tool job is the fact that no large capacity pump is on hand to pump the plug down, hence the process is much slower. Since it usually takes much longer for pumping down with the pumps usually available at cable tool jobs, it is hazardous to use an accelerator; in fact, a retarding agent would be an advantage on many deep jobs. The cement should preferably be a slow setting type.

The ideal way to cement casing on a cable tool job would be to use tubing and a cement retainer, were it not for the fact that it is often a difficult matter to unscrew from the retainer after the cement has been placed. The tubing method is the quickest method of placing cement in deep wells under pressure, but, unfortunately, there are so many hazards entering into a job of this kind that it is only used where absolutely necessary.

The dump bailer method is frequently used in cable tool work where only a small amount of cement is to be used. Quite often an ordinary sectional bailer, provided with a "bump stick," is used, but it is well worth while to obtain a dump bailer made expressly for cementing purposes. As already stated, more than one batch of cement may be dumped, provided each bailer full is allowed to set before another is mixed and dumped. When using the dump bailer it is better to get a good job on a small amount of cement than to run the chances of a poor job on a larger quantity.

2. Cementing solid liners

While not a usual thing to do, it is sometimes necessary or advantageous to cement a liner. This can be accomplished by connecting the liner to a string of rotary drill pipe, or tubing, by means of a left-hand nipple. However, it is far better to use drill pipe, due to its having a greater stiffness and having the joints thoroughly made up. Tubing is extremely limber, and there will be considerable "make-up" in the joints when unscrewing from the liner, making this feat rather difficult and involving the danger of getting the tubing cemented.

The liner, sufficiently long to reach from the cementing point to well within the water string, is run on the drill pipe close to bottom. A calculated amount of cement, sufficient to reach in and around the liner to a point 30 or 40 feet above it, is then pumped in and displaced to the equilibrium point. The liner is then set on bottom, and the drill pipe unscrewed and raised 20 feet or so above the liner. The pipe is then thoroughly washed out and withdrawn, or packed off at the casing and pressure applied.

3. Recementing water strings

When the first cement job is unsuccessful, and a recementing job is necessary, the governing factor is whether circulation or fluid movement can be established, and if established at all, the degree of freeness has to be taken into consideration.

Where circulation is perfectly free, it is possible to use the regular casing method.

Where circulation is not free, the tubing method is the only one which should be used. The one-plug method is possibly the best one to use in this case, for the following reasons:

1. It is possible to tell when all the cement has been forced out of the tubing.

2. It is possible to establish a definite top to the cement left in the casing.

3. It is not necessary to release the pressure in order to withdraw the tubing to a safe height above the cement; therefore, the cement is not disturbed after it has once been placed.

The casing is equipped with a packing head to fit the tubing. The tubing, equipped on bottom with either a swaged nipple, or, better still, a float valve, is run to where the desired top of the cement is to be. Precaution should be taken that the last joint of tubing be a full, long joint, so that the tubing may be raised through the packing head as high as possible. The hole is completely filled with water, the packing head tightened, and the outlet from the casing closed. The cement is then pumped in, taking care that the packing head does not leak. The plug is next inserted and pumped to bottom. As soon as the plug is on bottom, the valve on top of the tubing is closed before any pressure has been released, and the tubing is then pulled up the length of a joint without releasing the pressure on either tubing or casing. Should the packing head show a tendency to leak it should be securely tightened, and if any appreciable amount of fluid has leaked out during the raising of the tubing, the pump should be connected to the casing and a small quantity of fluid pumped in to replace that which has been lost. The job is then kept under pressure until the cement has set.

The thing that has to be watched carefully is that no leaks

occur at the packing head. So long as the casing is full of fluid, and there are no leaks, the cement cannot rise between the tubing and casing. Should a leak occur, there is danger of getting the tubing cemented in the casing.

4. Recementing old water strings

The foregoing paragraphs have applied particularly to original cement jobs which have proven failures upon testing. It has been assumed that the water strings were in good condition. Quite frequently old water strings will develop leaks due to corrosion, or channelling of the original cement job. Liners or oil strings, which cannot be pulled, may also be present, and the water string may be in poor condition and unable to withstand severe pressures. All these factors tend to complicate the handling of the cementing job, and cause variations in the procedure which will have to be adjusted to suit local conditions. Several possibilities will be considered in this report.

(a) Where no oil string or liner is present—assuming that the leak is around the shoe, and that the casing is in good condition, it will only be necessary to bridge the hole below the shoe and proceed according to whether circulation can be established or not, with one of the methods formerly discussed.

If the casing is worn or corroded to where it is too thin to withstand the pressure necessary to force the cement around the shoe, it will be advisable to use the tubing method with a cement retainer, provided, of course, that circulation or fluid movement can be obtained. The cement retainer is set at the desired point and a check made to be sure that fluid can be forced behind the pipe at a sufficient rate to allow for the placing of the cement.

The desired quantity of cement is then pumped in, using a plug, by preference, to pump it down with. The space between the tubing and casing should be full of water, and the water level carefully watched so as to tell whether anything is amiss. A flow of fluid between the tubing and casing may mean one of two things; either the retainer is leaking, or there is a leak in the tubing or casing above the retainer. In either case, the tubing should be unscrewed from the retainer, thoroughly washed and pulled out. If the cement has been successfully placed, the tubing should be unscrewed, washed and removed from the hole.

A suggested precaution, when using a cement retainer, is the placing of several guides on the lowest joints of the tubing in order to center the tubing in the hole. In case the tubing does become cemented in the casing, it is then possible to wash over it and recover it quite easily. If the tubing is found to be stuck, it may be worked but not pulled on sufficiently to part it, for if parted it will kink up so badly in the hole that washing or milling will be difficult and offer the added danger of drilling out through the casing while attempting to mill over the crooked tubing. The top of the cement can be ascertained by means of a measuring line, and the tubing removed to this point before washing or milling over the remainder. This holds true in any tubing cementing job; never pull the tubing in two!

(b) When oil string or liner is present—The Summary of Operations, California Oil Fields, of September, 1928, gives an excellent outline for procedure in a case of this kind, as follows:

"When it is necessary to recement a water string with the oil string, or liner, in the hole, the cement must be forced through perforations in the oil string, and out around the shoe of the water string to stop the leak. To be able to accomplish this, the cement must be prevented from going either down or up on the outside of the oil string, as well as on the inside of it. This requires a suitable barrier both in and behind the oil string, below the point of recementing, and the application of pressure between the oil string and water string be such that it will not clog or seal the oil sands, and which can be removed readily when the job is completed. The best material to use in forming such a bridge anywhere in the oil-producing formations is sand, screened through a seive finer than the perforations in the oil string.

"In recementing a water string through the oil string, the hole should be cleaned out to bottom, and the perforations in the oil string thoroughly washed with water, removing the oil and any mud fluid from the well. Water must be used, as sand would not settle readily through mud fluid or oil.

"When the hole has been thoroughly washed, the tubing should be lowered until it is just off bottom. A funnel should be placed in the top of the tubing and a stream of water turned into the tubing from the hose. The sand should be poured into the funnel and carried down the tubing with the water, settling in the bottom of the well. Since the top of the tubing will not be filled to the top as long as the water and sand pass out of it at the bottom, and water overflows from it at the surface, when the sand has filled up to the bottom of the tubing, the tubing will begin to plug up and the overflowing behind it at the surface will stop. If this is noted, continued running in of sand and water will cause the tubing to fill to the top. When the overflow stops, or the tubing fills to the top, the tubing should be pulled up any desired distance, after which the sand will continue to run out of the bottom of the tubing. The screened sand passes through the perforations in the oil string, making a bridge both inside and outside the oil string. The operation continues until the top of the sand bridge is built up to the desired depth. The location of the top of the sand bridge is easily controlled, and can be determined by setting the tubing on it.

"It is evident that the placing of sand bridges in holes can only be done when the pressure in the sands is less than the hydrostatic pressure of the head of water to the surface. If the hole cannot be filled with water, sand can be placed in the hole in the same manner and the sand bridge built up. However, the only evidence that the sand has filled up into the tubing will be the filling of the tubing to the top with water.

"When the sand bridge has been placed in the well, recementing can be carried out either by the dump bailer or tubing method, with or without a retainer, depending upon existing conditions. However, arrangements must be made to pack off between the water string and the oil string, as well as between the oil string and the tubing. There must also be suitable perforations in the oil string for the purpose of recementing through them. If there is doubt about the perforations being large enough, the oil string should be reperforated before the recementing operation is commenced.

"After the recementing operation is completed and the job tested, the sand bridges are cleaned out of the hole by circulating water through the tubing."

5. Recementing combination strings

Should it become necessary to recement a combination string the procedure is the same as the above description of recementing when an oil string or liner is present. If circulation can be established, the recementing job can be handled in the same manner as the original job. Where circulation cannot be regained, it will be necessary to make additional perforations be-

low the original cementing point, and a sand bridge built up to within a few feet of them. The cement may be introduced through tubing, or with a dump bailer, and pressure applied as previously described.

6. Cement repair work: Plugging back, etc.

By repair work is meant the placing of cement plugs in portions of the hole after the well is completed. These plugs may be placed either in the hole to the full diameter thereof, or in places behind the casing, depending upon the conditions of the job.

It is necessary on these jobs that great care be exercised, both in assembling the necessary data before the job is attempted and in conducting the actual cementing operations.

Before attempting the job, the following data should be assembled:

1. The production record should be carefully studied and analyzed to determine first of all the possible cause of trouble.
2. The drilling records should be examined to ascertain the probable condition of the hole behind the casing.
3. The casing record should be checked with reference to casing points, size of pipe, amount of cement used, amount of perforated pipe and size of perforations, if any.
4. The complete geological record should be carefully checked.
5. The present condition of the hole should be ascertained and the hole put into condition for the job.

Before starting the actual cementing, a complete outline of the procedure should be made, with the following precautions taken into consideration:

1. The type of method to be used.
2. The fluid in the hole must be hydrostatic equilibrium. If not, there is danger of agitation after the cement has been placed.
3. The temperature of the circulating fluid and of the bottom of the hole should be considered, as this will materially affect the setting time of the cement, and may be sufficiently high to cause the initial set to take place while the cement is being placed.
4. The tubing, if used, should be in good condition.
5. The hoisting equipment should be in good condition.
6. The cement mixing and placing equipment should be in good order.
7. The number of men used should be ample to carry out the job with the greatest possible dispatch.
8. All measurements must be accurately checked.
9. The cement should be the right type for the job, and in good condition.
10. Accelerator should not be used in the cement when the time necessary to place the cement is greater than the time for the initial set of the cement under temperature conditions of the circulating fluid and of the hole itself.
11. The slurry should have as high a specific gravity as practical, that is, a low water-cement ratio.
12. The water supply should be ample for all needs.
13. The temperature of the mixing water should be as low as possible.
14. Where a rotary is in use, the mud should be as light as is practical.

Plugging Off Bottom Water

Bottom water is here meant to include all water which occurs below the productive sand and will include such cases as the following:

1. Where the well has been drilled into a water sand below the oil.
2. Where the lower portion of a sand series has started to produce water.
3. Where edge water is encroaching upon an oil sand, etc.

(a) Where no oil string or liner is present—taking an example of a rotary drilled well that has been drilled into a water sand. The drill pipe is run close to the bottom of the hole, and the cement pumped in. The drill pipe may be slowly rotated during this process, and such a measure is rather good precaution against channelling. The cement may be forced out of the drill pipe by one of two methods.

The Kelly may be inserted into the top of the drill pipe loosely, so that air will enter through the tool joint, and mud pumped in on top of the cement. As soon as the mud commences to overflow the drill pipe, it is certain that hydrostatic equilibrium has been reached, and that the top of the cement column inside the drill pipe is equal to that on the outside. This, of course, is due to the cement being of a higher specific gravity than the mud. The Kelly may be screwed into the top of the drill pipe and a measured quantity of mud pumped in, sufficient to displace most of the cement out of the drill pipe. The drill pipe is then raised a few feet above where the top of the cement is desired and the excess cement circulated out of the hole, and the drill pipe either pulled out of the hole or raised to a safe height above the cement, where it may be packed off and pressure put on the hole, if desired.

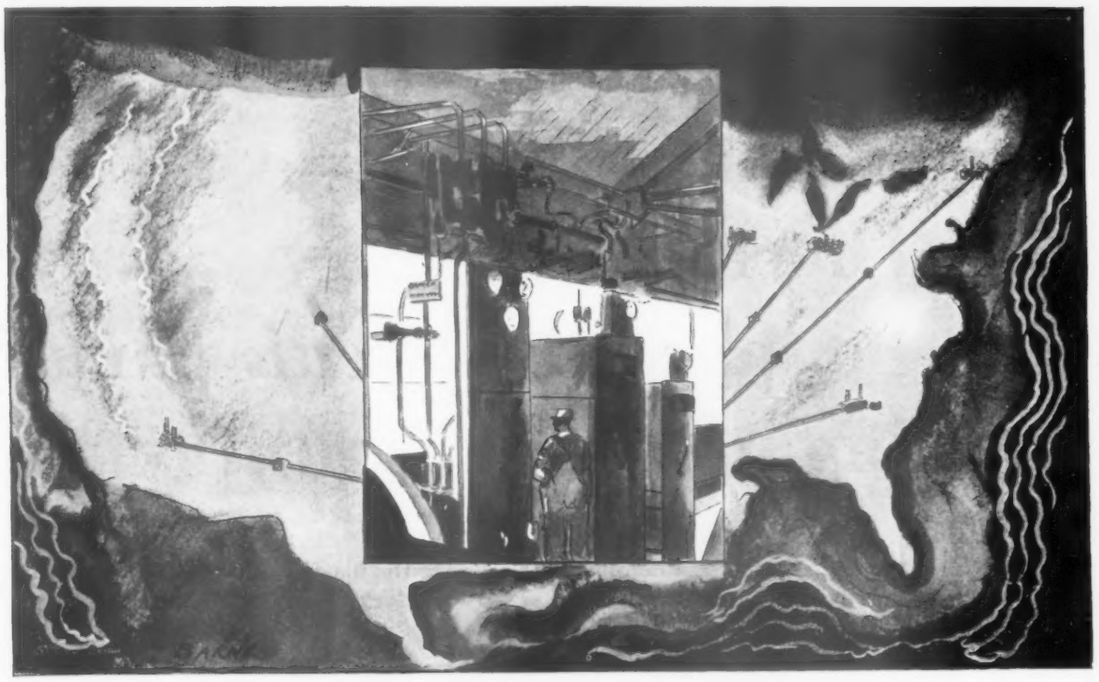
On cable tool jobs of this description, either tubing or the dump bailer may be used, depending upon the amount of cement to be placed. Where tubing is used, it is often quite a lengthy job to get all the excess cement circulated out of the hole where no large capacity pump is at hand. To speed up this dissipation of the excess cement the circulation can be "reversed" by pumping fluid into the casing and washing the cement out through the tubing. After circulation of the excess cement from the hole, it may be desirable to "pinch" a gate on the discharge from the hole and maintain 200 or 300 pounds pressure while circulating out the excess cement. Circulation may be kept up for several hours under pressure in that manner, and then the tubing may be pulled out.

Quite often a sand or lime series from which production has been obtained has been heavily shot and large cavities exist in the portion of the hole which has to be cemented. Such is the case in the fields of West Texas, and the necessary amount of cement to fill the shot holes is hard to estimate. In plugging off the bottom hole water at Borger, Texas, the procedure was to run 10 to 20 sacks of Lumnite (high alumina) cement per day until the hole was filled to the desired point. The cement was mixed with 4½ gallons of water to the sack of cement. This was run by the tubing method and let stand 24 hours. The top of the cement was then measured by means of a measuring line, and the tubing set on top of the cement to test its hardness. These wells were plugged back to 40 to 60 feet by this method, which was found to be very satisfactory. This method gave excellent data on the size of shot holes for future reference.

(b) Plugging back with oil string or liner present—The presence of an oil string or liner in the hole, and which cannot be pulled, makes the cementing process more difficult, since the cement must be placed both inside and outside of the casing. If the perforations in the oil string or liner are small, or not very numerous, it will be necessary to either tip or perforate the section of the casing where the cement is to be placed. The hole is then thoroughly washed out through the perforations, and the cement placed through tubing, using pressure as already described above.

It must be remembered that pressure cannot be applied to the cement if there are perforations above the cementing point, unless the space between the oil string and water string is full

(*Continued on page* 50)



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Markets • Production • Crude Prices

H. J. STRUTH, *Staff Economist, Houston, Texas*

Oklahoma City Gain Boosts United States Production

Oklahoma City recorded a gain in daily average crude production last week of 35,400 barrels, influencing an increase in national production of 30,550 barrels. The gain at Oklahoma City was partly due to the bringing in of four large producers, although the total increase in production of the state only amounted to 24,600 barrels, boosting Oklahoma's daily output to a point only 3650 barrels above the allowable figure of 465,000 barrels. Kansas also reported a gain of 5200 barrels, most of which was credited to the Voshell pool. Sentiment in Kansas seems to look with disfavor upon proration. Whether or not proration is desired in Kansas is entirely aside from the fact that the daily demand there will not exceed 117,000 barrels daily this year, and should, by all means, be limited to 112,000 barrels daily. Operators who are inclined to "throw over" measures of curtailment should carefully consider the effect of a "wide open" program at this time.

While existing limitations for production during the first quarter of this year imply that the daily average crude output should not exceed 2,062,000 barrels daily, as shown in the accompanying table, the fact remains that production could economically be increased to 2,328,000 barrels daily. This means that while the excess over allowable production is about 54,000 barrels daily, there is really a deficit of production under market demand of about 211,000 barrels daily. This implies that production could be increased to the extent of about 98,000 barrels a day in Texas; 51,000 barrels a day in Oklahoma; 3000 barrels a day in Kansas; and 22,000 barrels a day in California. Such a recommendation, however, does not imply that proration should be abolished, but sets an absolute economic limit for the areas named throughout the balance of this year. Although such a program of increased production is based upon sound economic principles, it is obvious that the chief deterrent to such procedure is the unwillingness of pipe line companies to take more oil.

A look ahead presents conclusive evidence of a much larger demand for crude, but the problem before the industry now is how to relieve the serious situation confronting producers in various sections of the country. If the pipe line companies would agree to take more oil—200,000 barrels more a day—and store a reasonable quantity for a short period of time, against an unquestionable increased demand beginning in April, the present problem of unconnected leases would be materially relieved. However, if the pipe line companies insist upon a program of hand-to-mouth buying, the producer must reconcile his present situation with the prospect of a necessarily larger demand later on. In the meantime, new fields are being brought into play and oil prices are hanging in the balance.

Regardless of what the demand for crude will be this year, it is obvious that crude prices, like all other commodity prices are destined to remain at low levels for some time to come. With crude actually selling for 35 cents a barrel in East Texas there is no longer any doubt about the future course of oil prices. Under existing and pending conditions there is only one course for producers to take, and that is to adopt a rigid program of economy and increased efficiency. The new order of the day is to be ready to meet any form of competition that may arise. If production costs more than the market value of crude, the logical result will be to abandon such properties. The trend toward low-cost, flush production is definitely mapped out; with it will come perhaps even lower prices than now prevail.

A decrease of 6800 barrels in Texas production was brought about last week through declines in Gray County, Salt Flat, Reagan County, Ector County and Crane-Upton Counties. The Joiner and Van districts reported increases of 2800 and 1550 barrels, respectively. Increases were also recorded, aside from those cited at Oklahoma City and Voshell, at Kettleman Hills and Ventura Avenue, California, Salt Creek, Wyoming, and Hobbs, New Mexico. The Gulf Coast, including Texas and Louisiana, reported a decline in production last week of 1000 barrels, Arkansas, a decline of 500 barrels, and Eastern States a decline of 2150 barrels.

The smaller production during the past six weeks has done much to balance supply and demand in California but stocks are not being reduced at a rapid rate, even with a smaller output. Consumption is usually lowest at this time of the year, so too much should not be expected during the winter months.

Gasoline production has continued high, despite a much smaller amount of crude run to stills. A better balance between refinery operations and crude production will be maintained under plans now being considered.

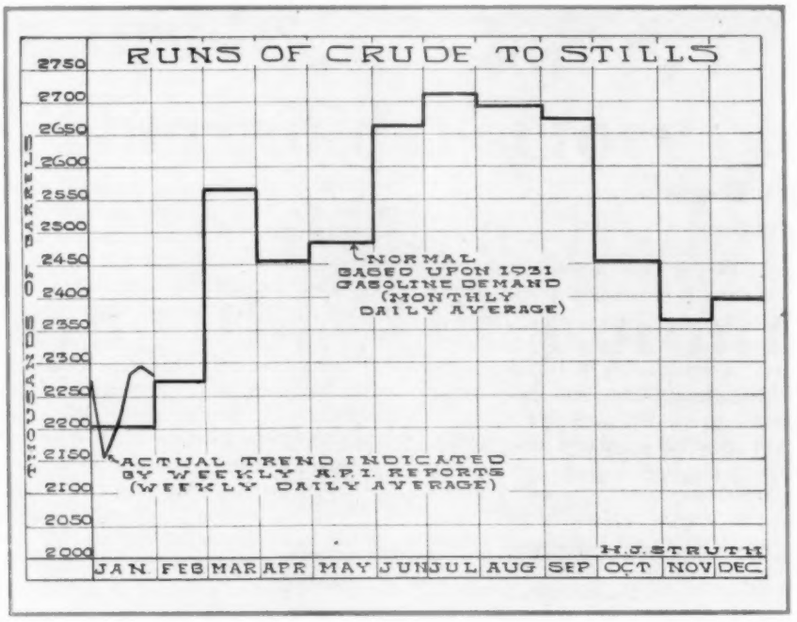
There is no serious threat of any field, and several operators are becoming friendlier toward conservation. Kettleman Hills will be held in check, even if only 90 per cent of the total acreage agrees to the unit plan of operation. Long Beach is again making its full allowable and Playa del Rey is about 15,000 barrels over its allotment. State production continues around 520,000 barrels.

Refinery Runs Reduced 81,000 Barrels Daily

With the realization that gasoline stocks were piling up at an excessive rate, refiners have, for the third consecutive week, reduced still runs. During the week ending February 7, runs to stills aggregated 14,976,000 barrels, or a daily average of about 2,139,000 barrels, according to returns received by the American Petroleum Institute. On a Bureau of Mines basis, the daily average runs to stills was about 2,203,000 barrels, or 81,000 barrels a day less than during the preceding week. Since the week of January 24, runs to stills have been reduced to the extent of about 96,000 barrels a day.

Despite the reduction reported in still runs, stocks of gasoline showed another gain last week, amounting to 801,000 barrels. Total stocks of gasoline reported to the American Petroleum Institute amounted to 42,457,000 barrels, against 41,656,000 barrels on January 31. It is natural to expect gasoline stocks to increase at this time of year, although the gains

MARKET SECTION



reported during past weeks have been somewhat excessive. It is believed, however, that the curtailment of still runs being carried on at present will have a tendency to adjust the gasoline stock situation. At any rate, if attempts to hold gasoline stocks down are continued throughout this month, the increased demand outlook for March and April will restore a favorable balance between supply and demand. The gasoline demand outlook offers no little encouragement to the refiner, but it is imperative that a reasonable degree of control be maintained over still runs if market improvement is to be justified during the season of greater gasoline demand.

Trade Commission Rescinds Market Code; Defers Order

New York City.—Following the request of the petroleum industry through the American Petroleum Institute, for 60 days postponement of the Federal Trade Commission's action rescinding all but three of an original 21 article of the code of ethics, the commission has advised W. R. Boyd, Jr., executive vice-president, that the request has been granted and that the action of the commission is suspended until after the 60-day period, within which the industry is to show cause in writing why the commission's action should be modified or rescinded.

Crude Runs to Stills, Gasoline Stocks and Gas and Fuel Oil Stocks

Week Ending January 31, 1931

(Figures in barrels of 42 gallons)

District—	Potential Daily Capacity	Potential Capacity Reporting Total	Potential Capacity Reporting Per Cent	Crude Runs to Stills Total	Crude Runs to Stills Daily Average	Crude Runs to Stills Per Cent Operated	Gasoline Stocks	Gas & Fuel Oil Stocks
East Coast	612,700	612,700	100.0	3,227,000	461,000	75.2	6,913,000	8,219,000
Appalachian	141,300	132,500	93.8	597,000	85,300	64.4	1,252,000	1,056,000
Indiana, Illinois, Kentucky	390,800	381,000	97.5	1,736,000	248,000	65.1	4,806,000	2,988,000
Oklahoma, Kansas, Missouri	461,100	412,200	89.4	1,647,000	235,300	57.1	2,933,000	3,838,000
Texas	809,000	743,500	91.9	3,857,000	551,000	74.1	**6,856,000	9,926,000
Louisiana-Arkansas	266,600	262,000	98.3	964,000	137,700	52.6	1,438,000	2,415,000
Rocky Mountain	150,100	139,700	93.1	237,000	33,800	24.2	1,737,000	949,000
California	898,500	887,600	98.8	3,257,000	465,300	52.4	15,722,000	102,321,000
Total week January 31	3,730,100	3,571,200	95.7	15,522,000	2,217,400	62.1	41,657,000	131,712,000
Total week January 24	3,730,100	3,571,200	95.7	15,623,000	2,231,800	62.5	41,495,000	132,052,000
Total *February 1, 1930	3,650,900	3,469,400	95.0	17,339,000	2,477,000	71.4	49,100,000	138,758,000
The Texas and Louisiana Gulf Coastal Figures Shown Below are Included above in the Totals of Their Respective Districts.								
Texas Gulf Coast	529,500	529,500	100.0	3,044,000	434,900	82.1	5,710,000	7,470,000
Louisiana Gulf Coast	147,500	147,500	100.0	677,000	96,700	65.6	1,212,000	1,390,000

*Total figures for last year are not comparable with this year's totals because of difference in percentage capacity reporting.
**Decrease from previous week partly caused by transfer from refinery stocks to gasoline pipe line.

MARKET SECTION

HOW LAST WEEK'S DAILY AVERAGE PRODUCTION COMPARES WITH NECESSARY AND NORMAL QUOTA LIMIT

	Indicated Demand First Quarter 1931	Economic Limit First Quarter 1931	Actual Daily Average Week Ending Feb. 7,1931	Excess
Arkansas	54,000	52,000	50,050	—1,950
California	547,000	500,000*	527,800	27,800
Kansas	109,000	105,000	109,250	4,250
Louisiana	73,000	71,000	71,750	750
Oklahoma	510,000	465,000*	468,650	3,650
Texas	739,000	644,000*	677,000	33,000
Balance of U. S.	236,000	225,000	212,000	—13,000
Total	2,268,000	2,062,000	2,116,500	54,500

*Allowable.

Opposition to an embargo on oil imports was presented at Washington recently by Albert R. White, vice-president of Associated Industries of Massachusetts. Mr. White opposed both the placing of an embargo and a tariff on imported oil, stating that the amount of crude coming into the country seems to be too small an item to shut out, considering how little good it would do. He also predicted that a tariff or limitation on imports of oil would increase the price of gasoline at Boston eight cents a gallon and $1.00 a barrel on crude. He stated that cheap fuel oil was desirable in the New England states and any increase in its price, as a result of an embargo or tariff, would force New England industries to revert to coal.

Along with this, comes the announcement made by the American Automobile Association to the effect that it still adheres to its position announced in 1929, opposing either a tariff or an embargo on imported crude and refined oil.

Cracked Gasoline Production

Week Ending January 31, 1931

(Barrels of 42 gallons)

District	Potential Charging Capacity (Daily) Total	Reporting	Per Cent	Production Total	Daily Average
East Coast	246,900	222,900	90.3	565,000	80,700
Appalachian	45,900	43,400	94.6	112,000	16,000
Ind., Ill., Ky.	294,200	280,200	95.2	433,000	61,900
Okla., Kans., Mo.	219,900	191,800	87.2	329,000	47,000
Texas	395,500	374,400	94.7	738,000	105,400
Louisiana-Ark.	109,400	107,900	98.6	252,000	36,000
Rocky Mountain	95,100	95,100	100.0	75,000	10,700
California	182,700	178,700	97.8	264,000	37,700
Total week Jan. 31	1,589,600	1,494,400	94.0	2,768,000	395,400
Total week Jan. 24	1,589,600	1,378,200	86.7	2,573,000	367,600
Total *Feb. 1, 1930		(Not Available)			

The Texas and Louisiana Gulf Coastal Figures Shown Below are included in the totals of their respective districts.

Texas Gulf Coast	305,000	300,500	98.5	589,000	84,100
Louisiana G. Coast	77,000	77,000	100.0	193,000	27,600

Imports of Petroleum

(Barrels of 42 gallons)

	Week Ended Jan. 31		Week Ended Jan. 24
AT ATLANTIC COAST PORTS—			
Baltimore	40,000		79,000
Boston	91,000		133,000
New York	909,000		1,093,000
Philadelphia	142,000		341,000
Others	77,000	"A"	259,000
Total	1,259,000		1,905,000
Daily Average	179,857		272,143
AT GULF COAST PORTS—			
Galveston District	.....		.....
New Orleans and Baton Rouge	.....		107,000
Port Arthur and Sabine District	65,000		.....
Tampa	47,000		.....
Total	112,000		107,000
Daily Average	16,000		15,286
AT ALL UNITED STATES PORTS—			
Total	1,371,000		2,012,000
Daily Average	195,857		287,429
Daily Average Four Weeks Ended	249,750		271,071
Distribution of Total Imports Is As Follows:			
Crude	939,000	"A"	1,292,000
Gasoline	40,000		369,000
Fuel Oil	392,000		351,000
Total	1,371,000		2,012,000

"A"—Revised.

California Oil Receipts

(Barrels of 42 gallons)

	Week Ended Jan. 31		Week Ended Jan. 24
AT ATLANTIC COAST PORTS—			
Baltimore	79,000	"A"	78,000
Boston	110,000		.....
New York	172,000		76,000
Philadelphia	112,000		.....
Others	112,000		.....
Total	585,000		154,000
Daily Average	83,571		22,000
AT GULF COAST PORTS—			
Total	.....		.....
Daily Average	.....		.....
AT ATLANTIC AND GULF COAST PORTS—			
Total	585,000		154,000
Daily Average	83,571		22,000
Daily Average Four Weeks Ended	65,571		63,464
Distribution of Total California Receipts Is As Follows:			
Gasoline	488,000	"A"	154,000
Fuel Oil	97,000		.....
Total	585,000		154,000

"A"—Revised.

MARKET SECTION

United States Daily Average Production

1930	Oklahoma	Kansas	Texas (Outside Gulf Coast)	Gulf Coast	North Louisiana	Arkansas	Eastern States	Rocky Mountain	California	United States Daily Av.	United States Total
January	671,050	111,700	672,650	178,300	37,650	58,500	142,250	73,850	688,850	2,634,800	81,574,650
February	631,900	111,400	654,600	199,950	39,450	58,400	135,050	74,850	746,550	2,652,150	74,280,200
March	622,650	115,500	644,400	206,000	41,600	58,600	132,700	73,600	649,000	2,544,050	78,865,400
April	657,050	122,200	640,950	206,800	42,100	57,800	138,700	75,950	625,700	2,576,250	77,018,100
May	663,300	131,000	662,350	203,900	39,900	53,800	137,150	82,500	623,700	2,597,700	80,529,600
June	665,550	133,600	668,300	210,500	40,300	56,900	135,750	84,600	598,000	2,593,500	77,806,900
July	594,750	121,600	652,350	209,400	40,550	55,400	137,200	98,350	610,450	2,520,050	78,121,200
August	558,850	115,650	646,400	206,600	41,500	55,100	128,550	106,000	611,250	2,470,900	76,597,600
September	558,900	116,550	606,550	200,750	40,150	53,550	121,400	110,650	604,900	2,413,400	72,402,205
October	542,100	114,850	609,500	194,850	41,500	52,800	121,750	104,000	590,800	2,372,150	73,536,350
November	491,550	111,400	579,350	190,100	44,050	52,000	116,400	101,950	601,200	2,288,000	68,639,150
December	459,300	105,550	533,400	189,300	43,000	51,100	112,200	100,500	587,450	2,181,800	67,636,500
January	452,000	106,350	511,050	188,850	41,100	50,700	110,250	96,650	535,750	2,092,700	64,874,450
January 31	444,050	104,050	521,700	191,400	41,950	50,550	110,500	95,750	526,000	2,085,950	14,601,650
February 7	468,650	109,250	514,850	190,400	43,500	50,050	108,350	103,650	527,800	2,116,500	14,815,500
Increase	24,600	5,200	.....	.....	1,550	....	.....	7,900	1,800	30,550	213,850
Decrease	.....	.....	6,850	1,000	....	500	2,150	....	.....	.....	.....

TEXAS
(Outside Gulf Coast)

	Feb. 7	Jan. 31
PANHANDLE DISTRICT		
Carson County	3,700	4,200
Gray County	44,000	45,400
Hutchinson County	8,600	8,950
Wheeler County	350	350
Others	350	350
Total	57,000	59,250
NORTH TEXAS		
Archer County	12,300	12,350
Burkburnett	7,500	7,500
Electra	8,600	8,650
Iowa Park-KMA	3,700	3,700
Montague and Cooke Cos.	6,400	6,400
Wilbarger	13,000	13,000
North Young County	9,850	9,850
Others	1,500	1,550
Total	62,850	63,000
WEST CENTRAL TEXAS		
Brown County	3,800	3,900
Callahan County	1,500	1,750
Coleman County	1,000	1,400
Eastland-Desdemona	3,850	3,950
Jack County	1,300	1,300
Palo Pinto County	400	400
Shackelford County	3,900	4,000
Stephens County	4,600	4,500
Throckmorton County	550	550
South Young County	2,200	2,200
Others	1,300	1,550
Total	24,400	25,500
WEST TEXAS		
Crane-Upton Counties	24,450	26,050
Crockett County	1,900	1,900
Ector	5,500	6,500
Howard County	26,900	26,900
Jones County	1,200	1,300
Mitchell-Scurry Cos.	2,000	1,950
Pecos County	3,500	3,550
Reagan County	32,000	33,100
Winkler County	50,900	51,550
Yates	90,950	91,350
Others	6,300	6,200
Total	245,600	250,350
EAST CENTRAL TEXAS		
Boggy Creek	2,550	1,900
Corsicana-Powell	5,200	5,150
Currie	350	300
Joiner District	7,350	4,550
Mexia	3,900	3,900
Nigger Creek	150	150
Richland	150	150
Van Zandt	29,000	27,450
Wortham	650	600
Others	50	50
Total	49,350	44,200
SOUTHWEST TEXAS		
Chapman-Abbott	5,850	5,150
Dale	250	250
Darst Creek	32,200	32,700
Laredo District	13,600	14,800
Luling	9,700	9,700
Lytton Springs	750	800
Salt Flat	11,400	14,100
Somerset	1,300	1,300
Others	600	600
Total	75,650	79,400
T'tl Tex. (Outside Gulf Coast)	514,850	521,700
TEXAS GULF COAST		
Barbers Hill	23,400	23,650
Batson	1,100	1,100
Big Creek	2,700	2,800
Blue Ridge	1,400	1,400
Boling	900	900
Damon Mound	700	600
Esperson	2,300	2,350
Fannett	1,100	1,100
Goose Creek	4,000	4,350
Hankamar	2,350	2,400
Hull	6,900	7,200
Humble	10,300	10,400
Moss Bluff	750	800
North Dayton	700	700
Orange	2,100	2,100
Orchard	2,100	2,300
Pettus	7,650	7,900
Pierce Junction	8,900	10,100
Port Neches	1,550	1,500
Raccoon Bend	8,000	8,600
Refugio	33,750	30,600
Saratoga	1,100	1,100
Somerville	2,850	2,600
Sour Lake	2,150	2,150
South Liberty	2,700	2,750
Spindle Top	12,200	12,200
Sugar Land	12,300	11,900
West Columbia	4,300	4,350
Others	1,900	3,000
Total	162,150	162,900
Texas Total	677,000	684,600
OKLAHOMA		
Allen	12,350	12,800
Asher	700	750
Blackwell	2,750	2,400
Bowlegs	11,500	12,200
Braman	1,850	1,850
Bristow Slick	12,000	11,900
Burbank	13,400	13,500
Carr City	13,050	13,550
Cromwell	4,800	4,450
Cushing	12,800	12,750
Davenport	900	900
Duncan District	6,800	6,800
Earlsboro	14,200	16,200
East Earlsboro	13,800	17,950
East Little River	9,950	10,500
East Seminole	1,800	1,950
Fox	950	950
Garber	4,150	4,300
Graham	2,800	2,800
Healdton	9,750	9,700
Hewitt	6,000	6,000
Hubbard	900	950
Konowa	15,900	17,850
Little River	21,800	21,850
Logan County	3,700	3,800
Maud	2,400	2,950
Mission	4,250	6,050
North Okmulgee	8,150	8,100
Okla. City	102,700	67,300
Osage (outside Burbank)	2,500	22,550
Papoose	2,100	2,100
Pearson	600	550
St. Louis	19,450	21,100
Sasakwa	3,950	4,150
Scholem-Alechem	12,000	12,050
Searight	5,650	5,200
Seminole	11,500	13,000
S. Earlsboro	7,000	7,850
South Okmulgee	4,500	4,500
Thomas	600	600
Tonkawa	5,000	5,000
West Asher	8,000	8,050
Wewoka	12,000	6,500
Yale Jennings	5,550	5,500
Others	32,150	32,300
Total	468,650	444,050
CALIFORNIA		
Dominguez	9,800	9,800
Elwood-Goleta	30,400	30,600
Huntington Beach	22,600	22,500
Inglewood	15,300	15,300
Kettleman Hills	27,000	25,500
Long Beach	90,500	90,000
Midway-Sunset	53,600	53,600
Playa Del Rey	34,700	35,500
Santa Fe Springs	71,000	71,000
Seal Beach	16,600	16,800
Ventura Avenue	44,500	43,000
Others	111,800	112,400
Total	527,800	526,000
KANSAS		
Augusta-Fox Bush	3,100	3,100
Churchill	4,000	4,000
Eldorado-Towanda	13,200	13,150
Florence-Covert	800	850
Greenwood County	17,000	17,000
Oxford	2,400	2,400
Peabody-Ebling	1,600	1,600
Rainbow Bend	1,150	1,150
Russell	3,200	3,150
Sedgwick	19,300	18,900
Voshell	18,000	13,750
Others	25,500	25,000
Total	109,250	104,050
NORTH LOUISIANA		
Caddo Heavy	2,850	2,750
Caddo Light	8,150	8,100
Carterville	1,800	1,850
Cotton Valley	1,800	1,750
DeSoto-Red River	2,750	2,800
Haynesville	5,600	5,400
Holly	800	850
Homer	3,350	3,400
Urania	4,900	4,900
Zwolle	10,000	8,700
Others	1,500	1,450
Total North Louisiana	43,500	41,950
LOUISIANA GULF COAST		
Bayou Boullion	100	100
East Hackberry	3,900	3,950
Edgerly	500	450
Evangeline	600	700
Hackberry	800	850
Lake Barre	3,400	3,450
Lockport	5,000	5,400
Port Barre	1,700	1,750
Sorrento	50	....
Sulphur Dome	2,050	2,000
Sweetlake	1,100	1,100
Vinton	5,750	5,650
White Castle	1,000	1,000
Others	2,300	2,100
Total Louisiana Gulf Coast	28,250	28,500
Louisiana Total	71,750	70,450
ARKANSAS		
Champagnolle	4,500	4,550
El Dorado	3,850	3,900
Lisbon	800	800
Nevada	1,000	1,000
Smackover Heavy	33,500	33,950
Smackover Light	4,450	4,500
Stephens	850	850
Others	1,100	1,000
Total	50,050	50,550
MOUNTAIN STATES		
WYOMING		
Big Muddy	1,900	1,900
Elk Basin	600	700
Grass Creek	2,150	2,100
La Barge	1,700	1,750
Lance Creek	150	150
Lost Soldier	7,200	3,750
Oregon Basin	1,900	2,900
Rock River	2,000	2,000
Salt Creek	28,100	25,850
Others	5,100	4,150
Total	50,800	45,250
MONTANA		
Cat Creek	1,100	1,100
Pondera	1,550	1,500
Sunburst	4,500	4,500
Others	50	50
Total	7,200	7,150
COLORADO		
Florence	400	650
Fort Collins	1,100	1,150
Moffats (Craig)	1,100	1,150
Others	1,800	1,750
Total	4,400	4,700
NEW MEXICO		
Artesia	600	650
Balance Lea County	6,250	6,450
Eddy	100	100
Hobbs High	32,600	29,800
Hogback	450	350
Rattlesnake	1,150	1,250
Table Mesa	100	50
Total	41,250	38,650
Total Mountain States	103,650	95,750
EASTERN STATES		
(Including Ill., Ind., Ohio, W. Va., Pa., Ky., N. Y.)	99,100	101,250
Michigan	9,250	9,250
Total Eastern States	108,350	110,500
PRODUCTION SUMMARY		
East of Rockies	1,485,050	1,464,200
Total U. S.	2,116,500	2,085,950

MARKET SECTION

Little Chance for Capper Bill in Present Congress

Washington, D. C.—The house ways and means committee, to which the Capper bill restricting oil imports has been referred, is struggling with the question whether its provisions contravene those of a year old treaty to which the United States is a party, the effect of which is said to be an agreement not to raise tariff barriers such as embargoes. The committee will meet February 12 for consideration of the measure.

Provided other important legislation is disposed of, it is anticipated that the committee will hold hearings to determine the action to be taken as a result of the report of the tariff commission showing a spread of more than $1 between the cost of American and Venezuelan oil as laid down at east coast refineries.

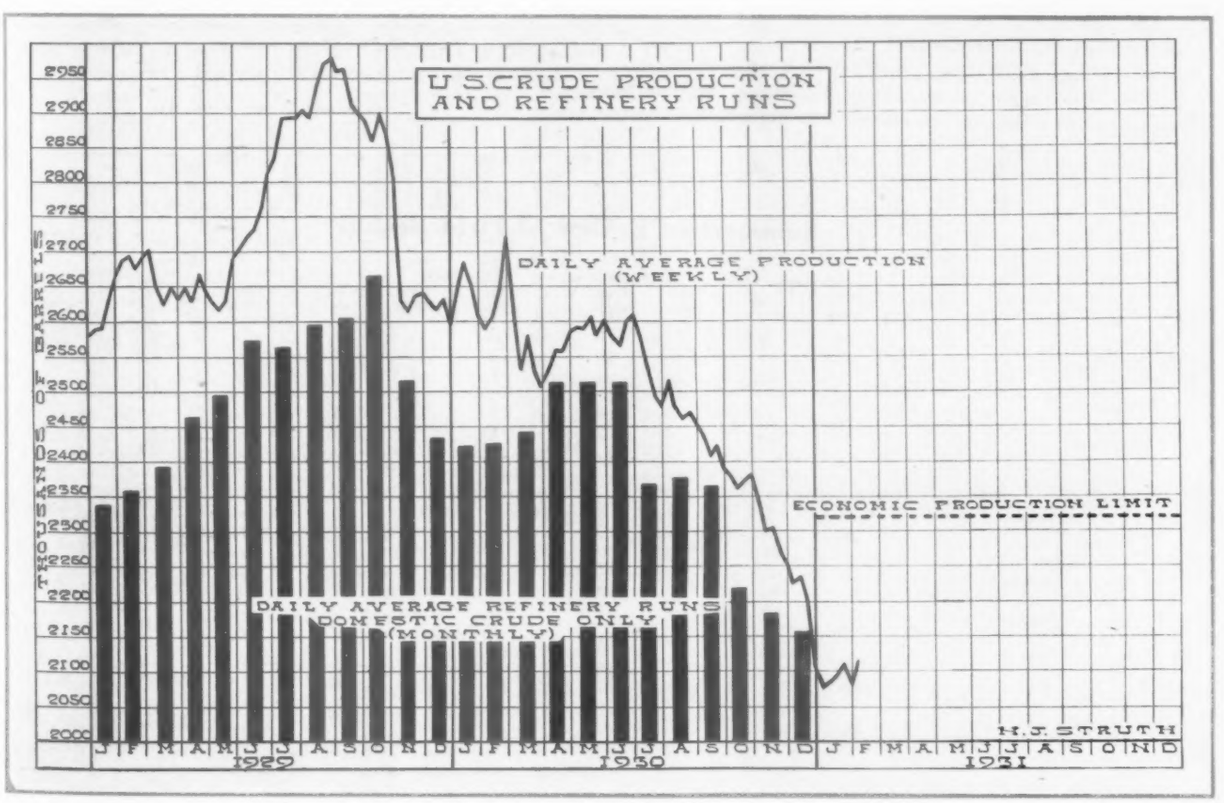
The situation in Congress gives little or no encouragement to the hope that the Capper bill may pass at this session, of which only three weeks remain, but the administration is declared to be anxious that the situation be disposed of and not left to hang over to the next Congress.

The action of other countries under the treaty was declared to justify the adoption of the bill, despite the Geneva treaty, according to Russel Brown, secretary of the governors oil relief conference. Laws limiting imports of oil have been adopted in France, he asserted, and the treaty seems to have had no effect thereon. Other commodities also have been the subject of prohibitive legislation, he charged, and "if the Geneva treaty, to which France is a signatory, as well as the United States, does not interfere with the French people protecting themselves, their own industries, and their national budget, it is difficult to see why this treaty should be invoked to prevent the Congress of the United States giving to one of the nation's greatest industries that protection which it desperately needs, and without which our tremendous unemployment problem may never be solved."

The treaty which has been invoked in opposition to the Capper bill, was proclaimed last March, the result of a resolution of the League of Nations, its main purpose being the elimination of such barriers to trade as prohibitions and embargoes. Opponents of the bill contend that it comes squarely under the treaty, since one provision of the measure would be the absolute prohibition of imports of refined products for three years.

Posting of a flat price of 40 cents per barrel for Rusk County, East Texas, crude at the well by Panola Pipe Line Corporation effective February 6 will likely be met by major companies as their lines begin operations. The above concern is connected to more than half the completed wells in the Joiner field, and in adopting the above schedule is paying producers more per barrel than other buyers now offer for the 38 to 40 gravity oil. The bulk of this company's tank car shipments are consigned to Sinclair Refining Company's refinery and terminal near Houston.

A gasoline pipe line from Providence, Rhode Island, to Springfield, Massachusetts, is to be built by the Standard Oil Company of New York. The line will be six inches in diameter and will facilitate transportation of gasoline from that company's sea loading terminal at Providence to Springfield. The distance between these points is 100 miles.



MARKET SECTION

Weekly Comparisons of Permits Granted for New Wells

	Week Ending Feb. 7	Previous week	This week 1930	Total this Month	This month 1930	Total this year	Total this date last year	1930 year total
Arkansas	4	..	..	4	4	8	15	108
California	9	..	13	9	26	35	83	922
Louisiana	2	12	8	2	21	44	86	948
Kansas	14	16	13	14	32	68	93	944
Oklahoma	25	22	31	25	47	144	295	2,830
Texas	81	75	118	81	198	462	850	7,052
Total	135	125	183	135	328	761	1,522	12,804

Revise Texas and New Mexico Field Production Allowables

Fort Worth, Texas. — Revisions made on production schedules of the leading prorated fields in Texas and New Mexico showed comparatively little change at the beginning of the February period. Slight increases in production allowances awarded Van and the Howard-Glasscock fields were offset by decreases sustained by Crane-Upton, Ector and Hobbs fields. Unfavorable market influence due to follow in the wake of increased production in the Rusk-Gregg County district, where proration is meeting with stubborn resistance, is causing uneasiness among West Texas operators, as the latter have been slated to make decreased production allowances by major crude purchasers. Yates field is expected to be the first West Texas area to be asked to take a smaller production quota, while the Crane-Upton area received an advance cut of 4,645 barrels at the start of the new period.

An average daily crude yield per well of 30.91 barrels is now in effect in the Crane-Upton district, as result of purchasers having cut their combined nominations 4646 barrels to a low level of 18,484 barrels daily. Cuts were made by Humble Oil & Refining Company, The Texas Company, and Tidal Refining Company.

Howard-Glasscock County district's proration quota advanced from 25,993 to 26,614 barrels beginning February 1, thus giving the area an average output of 50.22 barrels daily per well. Cosden Oil Company is absorbing 8,000 barrels of this production, although operating in receivership.

Operators in the Texas Panhandle would be on a cramped basis at the prevailing crude price schedule if proration was being adhered to in Gray County, but with two important producing units defying proration restrictions by temporary injunctions, and others doing about as they please, the district is greatly exceeding its allowable quota of 39,965 barrels daily. This figure would permit an average yield of 20.27 barrels daily from the 1972 pumping and flowing wells. However, proration leaders have accomplished much in seeing that pipe line connections and market relief is provided for all wells reasonably close to

(*Continued on page 66*)

Summarized Review of Field Results

	Completions		Oil Wells		Gas Wells		Failures		Initial Prod.	
	This week	Last week	This week	Last week	This week	Last week	This week	Last week	This week	Last week
Arkansas	5	6	2	6	3	..	..	..	200	137
California	13	11	11	10	..	..	2	1	21,245	4,550
Indiana	3	2	..	..	1	1	2	1	...	...
Kansas	8	9	4	5	..	3	4	1	3,410	2,265
Kentucky	4	11	..	4	1	3	3	4	...	82
Louisiana	9	15	..	7	1	1	8	7	...	9,940
Michigan	3	1	3	..	..	1	..	..	600	...
Mississippi	..	1	..	..	..	1	..	..	...	...
Missouri	1	..	..	..	..	..	1	..	...	...
New Mexico	1	2	1	2	..	..	..	..	4,175	8,355
Ohio	28	31	7	9	18	12	3	10	60	45
Oklahoma	20	40	15	20	4	6	1	14	89,025	118,564
Pennsylvania	6	16	..	12	5	2	1	2	...	27
Texas	84	94	41	46	5	7	38	41	25,835	52,185
West Virginia	3	9	3	..	..	9	..	..	17	...
Illinois	2	..	1	..	..	..	1	..	18	...
New York	..	3	..	3	..	..	..	..	...	8
Total	190	251	88	124	38	46	64	81	144,585	196,158
Increase	..	..	..	..	..	..	..	..	...	...
Decrease	61	..	36	..	8	..	17	..	51,573	...

MARKET SECTION

Crude Oil Price Quotations

(Revised to February 10, 1931)

▼ ▼ ▼

EASTERN FIELDS

(Posted by Joseph Seep Purchasing Agency)

Bradford—Alleghany district (posted by Tide Water Pipe Co., Ltd.) (Effective Nov. 13, 1930) $2.15

Penna. Grade Oil in National Transit Lines (Other Pennsylvania) (Effective, Nov. 13, 1930) 1.85

Penna. Grade Oil in Southwest Penna. Pipe Lines (Other Pennsylvania) (Effective Nov. 13, 1930) 1.80

Penna. Grade Oil in Eureka Pipe Lines (West Virginia) (Effective Nov. 13, 1930) 1.70

Penna. Grade Oil in Buckeye Pipe Lines (Macksburg, O.) (Effective Nov. 13, 1930) 1.45

Corning Grade in Buckeye Pipe Lines (Ohio) (Effective Oct. 28, 1930)..... 1.25

Somerset Oil in Eureka Pipe Lines (Effective July 23, 1930) 1.14

Ragland Grade in Cumberland Pipe Lines (Kentucky) (Effective Jan. 9, 1929)... 0.60

*Oil run prior to July 1, 1929 is $2.10 per bbl.

(Posted by Stoll Oil Refining Company)

Oil City, Ky., oil in Stoll lines (Effective Nov. 8, 1930 ..... 1.00

MICHIGAN

(Posted by Dixie Oil Company)

Traverse and Dundee (Muskegon), effective April 16, 1930, same gravity and price schedule as Prairie posts in Oklahoma and Kansas, on gravity basis prior to reduction on Oct. 27, 1930.

(Posted by Pure Oil Company)

Midland, Midland County, Oct. 27, 1930..$1.10

CENTRAL STATES FIELDS

(Posted by Ohio Oil Company)

(Effective Oct. 28, 1930)

Wooster	$1.35	Princeton	1.30
Lima	1.10	Illinois	1.30
Waterloo	1.20	Plymouth	.88
Indiana	.87	W. Kentucky	1.15

CANADIAN CRUDE

(Posted by Imperial Oil Refineries, Ltd.)

(Effective October 28, 1930)

Petrolia	$1.50
Oil Springs	1.57

OKLAHOMA, KANSAS and NORTH TEXAS

Prices of Prairie Oil & Gas Co., and Stanolind Crude Oil Purchasing Company, Effective Nov. 1, 1930. Carter Oil Company Same Schedule Effective Oct. 28.

Below 29	$0.65	35-35.9	.92
29-29.9	.69	36-36.9	95
30-30.9	.73	37-37.9	.98
31-31.9	.77	38-38.9	1.01
32-32.9	.81	39-39.9	1.04
33-33.9	.85	40 and above	1.07
34-34.9	.89		

Magnolia Petroleum Company Effective October 28

Below 26	.53	27-27.9	.61
26-26.9	.57	28-28.9	.65

From here to 40 and above gravity same schedule as above.

NORTH TEXAS

North Texas Crude in Wichita, Wilbarger, Archer and Northern Young counties:

All Purchasers

(Effective Jan. 14, 1931)

Below 29 gravity	$ .55
29-29.9	.57
30-30.9	.59
31-31.9	.61
32-32.9	.63
33-33.9	.65
34-34.9	.67
35-35.9	69
36-36.9	.71
37-37.9	.73

(Continued on page 42)

California Prices

Effective September 15, 1930, at 7:00 A. M. the following are the current prices offered by STANDARD OIL COMPANY OF CALIFORNIA

Gravity	Signal Hill	Seal Beach	Alamitos Heights	Huntington Beach	Inglewood	Olinda-Brea Canon	Athens-Rosecrans Dominguez	Elwood Terrace	Torrance	Richfield	Whittier La Habra	Montebello	Coyote Hills	Santa Fe Springs	Newhall McKittrick Kern River	Midway-Sunset Elk Hills	Buena Vista Hills	Lost Hills	Coalinga	Wheeler Ridge	Playa del Rey†
14-14.9	$ .70	$ .70	$ .70	$ .70	$ .70	$ .70			$ .70	$ .70	3 .70	$ .70	$ .70		$ .55	$ .55	$ .55	$ .55	$ .55	$ .55	
15-15.9	.70	.70	.70	.70	.70	.70			.70	.70	.70	.70	.70		.55	.55	.55	.55	.55	.55	
16-16.9	.70	.70	.70	.70	.70	.70			.70	.70	.70	.70	.70		.55	.55	.55	.55	.55	.55	
17-17.9	.70	.70	.70	.70	.70	.70			.70	.70	.70	.70	.70		.55	.55	.55	.55	.55	.55	
18-18.9	.76	.76	.76	.76	.76	.76			.76	.76	.76	.71	.76		.55	.62	.62	.62	.62	.62	
19-19.9	.82	.82	.82	.82	.82	.82			.82	.82	.82	.77	.82		.55	.70	.70	.70	.70	.70	
20-20.9	.88	.88	.88	.88	.88	.88			.88	.88	.87	.83	.87			.78	.78	.78	.78	.78	$.74
21-21.9	.94	.94	.94	.94	.94	.94			.94	.94	.93	.90	.93	$.92		.86	.86	.86	.86	.86	.77
22-22.9	1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	.98	.97	.98	.95		.94	.94	.94	.94	.94	.81
23-23.9	1.07	1.07	1.07	1.07	1.07	1.07			1.07	1.07		1.05	1.04	1.01		1.02	1.02	1.02	1.02	1.02	.84
24-24.9	1.12	1.12	1.12	1.12	1.12	1.12	$1.12		1.12	1.12		1.08	1.08	1.05		1.06	1.06	1.06	1.04	1.04	.87
25-25.9	1.17	1.17	1.17	1.17	1.17	1.17	1.17		1.17	1.17		1.11	1.12	1.09		1.10	1.10	1.10	1.06	1.06	.90
26-26.9	1.22	1.22	1.22	1.22	1.22	1.22	1.22		1.22	1.22		1.15	1.16	1.13		1.14	1.14	1.14	1.08	1.08	
27-27.9	1.26	1.26	1.26	1.26	1.26	1.26	1.27		1.26	1.26		1.19	1.21	1.18		1.18	1.18	1.18	1.11	1.10	
28-28.9	1.30	1.30	1.30	1.30	1.30	1.30	1.32		1.30	1.30		1.23	1.25	1.23		1.23	1.23	1.23	1.15		
29-29.9	1.34	1.34	1.34	1.34		1.34	1.37			1.34		1.26	1.29	1.28		1.29	1.29	1.29	1.19		
30-30.9	1.38	1.38	1.38	1.38		1.38	1.42			1.38		1.29	1.33	1.33		1.35	1.35	1.35	1.23		
31-31.9	1.43	1.43	1.43	1.43		1.43	1.43							1.38		1.41	1.41	1.41	1.27		
32-32.9	1.48	1.48	1.48	1.48			1.52							1.43		1.47	1.47	1.47	1.31		
33-33.9							1.57							1.48		1.53	1.53	1.53	1.35		
34-34.9							1.62	$1.32						1.53				1.59	1.39		
35-35.9							1.66	1.39						1.58				1.65	1.43		
36-36.9							1.72	1.46						1.63							
37-37.9							1.78	1.53						1.68							
38-38.9							1.84	1.60						1.73							
39-39.9							1.90	1.66						1.78							
40-40.9							1.96	1.72													
41-41.9							2.02	1.78													
42-42.9							2.08	1.84													

Ship

F. O. B.

KETTLEMAN HILLS*	
35-39.9	$1.10
40-44.9	1.20
45-45.9	1.35
50-54.9	1.50
55 and above	1.65

*Posted by Union Oil Company. †Effective December 18, 1930.

MARKET SECTION

▼ ▼ CRUDE OIL PRICE QUOTATIONS ▼ ▼

(Continued from page 41)

38-38.9	.75
39-39.9	.77
40 and above	.79

Ranger, North Texas except as listed above, Mexia, Powell, Boggy Creek, Richland, Worthham, Lytton Springs, Currie, Moran, and Nocona crudes:

All Purchasers
(Effective Jan. 14, 1931)

Below 29 gravity	$ .65
29-29.9	.69
30-30.9	.73
31-31.9	.77
32-32.9	.81
33-33.9	.85
34-34.9	.89
35-35.9	.92
36-36.9	.95
37-37.9	.98
38-38.9	1.01
39-39.9	1.04
40 and above	1.07

PANHANDLE

All Purchasers
(Effective Jan. 14, 1931)
Gray County Crude

Below 29 gravity	$ .48
29-29.9	.50
30-30.9	.52
31-31.9	.54
32-32.9	.56
33-33.9	.58
34-34.9	.60
35-35.9	.62
36-36.9	.64
37-37.9	.66
38-38.9	.68
39-39.9	.70
40 and above	.72

All Purchasers
(Effective Jan. 14, 1931)
Carson and Hutchinson County Crude

Below 29 gravity	$ .43
29-29.9	.45
30-30.9	.47
31-31.9	.49
32-32.9	.51
33-33.9	.53
34-34.9	.55
35-35.9	.57
36-36.9	.59
37-37.9	.61
38-38.9	.63
39-39.9	.65
40 and above	.67

WEST TEXAS

Posted by All Purchasers, Effective October 28, 1930

Winkler and Pecos County Crudes:

Below 25	$ .55	31-31.9	.69
25-25.9	.57	32-32.9	.71
26-26.9	.59	33-33.9	.73
27-27.9	.61	34-34.9	.75
28-28.9	.63	35-35.9	.77
29-29.9	.65	36 and above	.79
30-30.9	.67		

Crane, Upton, Crockett, Ector, Ward, Loving, Matchell,* Howard, and Glasscock Counties, Texas, and Lea County, New Mexico crudes

Posted by All Purchasers, Effective Oct. 28, 1930

Below 25	$ .50	31-31.9	.64
25-25.9	.52	32-32.9	.66
26-26.9	.54	33-33.9	.68
27-27.9	.56	34-34.9	.70
28-28.9	.58	35-35.9	.72
29-29.9	.60	36 and above	.74
30-30.9	.62		

*Magnolia Petroleum Company uses Gravity scale and Coltex Refining Company pays flat price of 60 cents for Mitchell County.

GULF COAST

(Posted by Humble Oil & Refining Company, The Texas Company and Sun Company)

Gulf Coast Crude will be classified as follows in fields designated below:

Goose Creek, Hull, Boling, Liberty, Orange, Pierce Junction, Raccoon Bend, Barbers Hill, Sour Lake, Spindletop, Sugar Land, West Columbia and Humble crudes:

"A" GRADE—All crudes conforming to the following tests:

Viscosity—Not less than 100 seconds at 100° F. Saybolt.

Sulphur—Not over .4%.

Beaume Gravity—Not over 25 at 60° F.

Cold test of distillates having a viscosity of 1000 seconds at 100° F, shall not be over 5° F.

"A" GRADE—$ .80.

"B" GRADE—Embraces all Coastal crude which does not meet the test for "A" grade crude:

All Purchasers
(Effective Jan. 14, 1931)

High Island	$ .75		
Grade "A"	.80		
Grade "B"			
Below 25	$ .69	33-33.9	.87
25-25.9	.71	34-34.9	.89
26-26.9	.73	35-35.9	.91
27-27.9	.75	36-36.9	.93
28-28.9	.77	37-37.9	.95
29-29.9	.79	38-38.9	.97
30-30.9	.81	39-39.9	.99
31-31.9	.83	40 and above	1.01
32-32.9	.85		
Jennings, La.	.80		
Markham (The Texas Company)	.69		

SOUTHWEST TEXAS

All Purchasers
(Effective Jan. 14, 1931)

Refugio Heavy crude, below 25 gravity	.69		
Refugio Light crude:			
25-25.9	$ .71	33-33.9	.87
26-26.9	.73	34-34.9	.89
27-27.9	.75	35-35.9	.91
28-28.9	.77	36-36.9	.93
29-29.9	.79	37-37.9	.95
30-30.9	.81	38-38.9	.97
31-31.9	.83	39-39.9	.99
32-32.9	.85	40 and above	1.01
Mirando crude	$ .69		
Salt Flat crude	.90		
Darst Creek crude	.90		
Pettus crude	1.10		
Luling	.75		
Corsicana, heavy	.75		

Determination of quality, deductions, adjustment for temperature, etc., on oil purchased in Texas, shall be in accordance with the rules and regulations of the Texas Railroad Commission, and on oil purchased in New Mexico shall be in accordance with the rules and regulations of the Corporation Commission of New Mexico.

LOUISIANA-ARKANSAS

All Purchasers Except Magnolia Petroleum Co., Effective Oct. 29, 1930

Pine Island District, Haynesville District, Bull Bayou District, El Dorado District, Rainbow District, Cotton Valley

Below 29	$ .65	37 to 37.9	.98
29 to 29.9	.69	38 to 38.9	1.01
30 to 30.9	.73	39 to 39.9	1.04
31 to 31.9	.77	40 to 40.9	1.07
32 to 32.9	.81	41 to 41.9	1.10
33 to 33.9	.85	42 to 42.9	1.13
34 to 34.9	.89	43 to 43.9	1.16
35 to 35.9	.92	44 and above	1.19
36 to 36.9	.95		
Urania, La.	.75		
Bellevue, La	1.00		

Magnolia Petroleum Company, Effective October 30, 1930

Below 26	$ .53	27-27.9	.61
26-26.9	.57	28-28.9	.65

From here prices same as schedule above.

STEPHENS

Below 29	$ .54	31 to 31.9	.66
29 to 29.9	.58	32 and above	.70
30 to 30.9	.62		
Smackover	.70		
El Dorado, East Field	.70		

ROCKY MOUNTAIN FIELDS

(Salt Creek prices effective Oct. 28, 1930)

‡Salt Creek	29-29.9	.69
" "	30-30.9	.73
" "	31-31.9	.77
" "	32-32.9	.81
" "	33-33.9	.85
" "	34-34.9	.89
" "	35-35.9	.92
" "	36-36.9	.95
" "	37 and above	.98
Elk Basin (Effective Oct. 28, 1930)		.125
Grass Creek light		1.25
Big Muddy		1.00
Lance Creek		1.33
Rock Creek		1.01
Mule Creek		1.20
Rex Lake		1.10
‡Osage (Nov. 1, 1930)		.85
‡Cat Creek, Montana		1.25
Pondera		1.45
Sunburst, Montana		1.55
‡Hogback, New Mexico		1.40
Artesia, New Mexico		.75

‡Posted by Midwest Refining Co. Midwest also buys Grass Creek light and Elk Basin.

STATE CRUDE PRODUCTION TAXES

Oklahoma—Three per cent of gross value less royalty interest.

Texas—Two per cent of gross value.

Louisiana—From four to 11 cents a barrel, depending upon gravity.

Arkansas—2.6 per cent of gross market value.

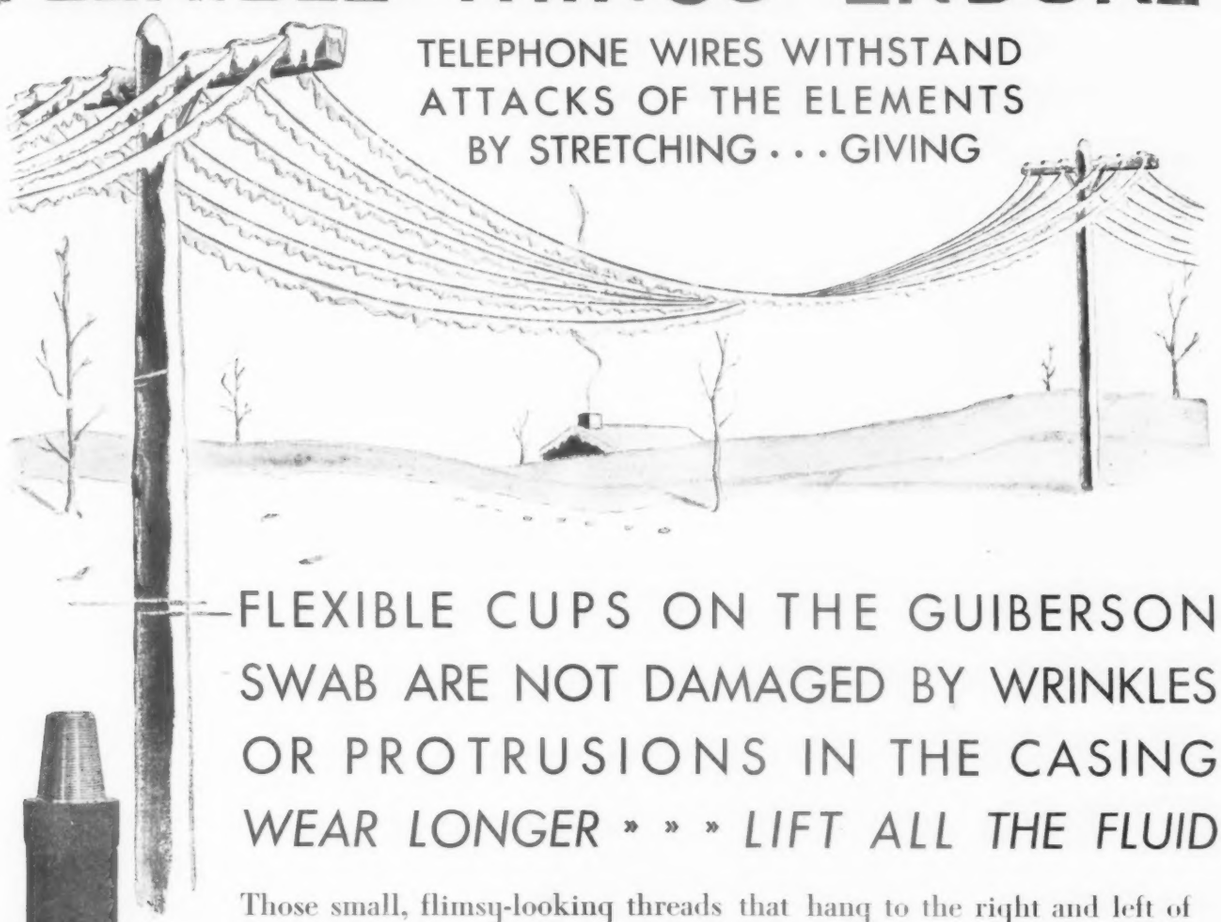
Montana—Two per cent of gross value at well.

Wyoming and New Mexico—Production tax based upon state and county assessments.

California—.66443 mills per barrel of oil produced and 17.39 cents per acre on proved oil lands.

FLEXIBLE THINGS ENDURE

TELEPHONE WIRES WITHSTAND ATTACKS OF THE ELEMENTS BY STRETCHING . . . GIVING



FLEXIBLE CUPS ON THE GUIBERSON SWAB ARE NOT DAMAGED BY WRINKLES OR PROTRUSIONS IN THE CASING

WEAR LONGER » » » LIFT ALL THE FLUID

Fully patented

Those small, flimsy-looking threads that hang to the right and left of the highway or railroad - - - sometimes singing in the wind - - - sometimes weighted down with ice and snow - - - always gently swaying - - - think what a burden they carry *inside* and what they withstand *outside!* The cups of the Guiberson Swab are readily comparable. Their burden is valuable oil and their hazards are wrinkles, dents, protrusious - - - worn casing.

The Flexible Cups of the Guiberson Swab give way to protrusions or wrinkles in the casing and pass over worn and pitted spots without injury, steered by guide wires that enclose each pliant cup like a basket. The heavier the load, the more firmly are the cup rims sealed against the casing walls, even against the protrusions - - - just enough to preserve every drop of fluid on the trip up. Pressure from below collapses the cups, allowing far speedier passage into the hole. The Guiberson Swab is doing most of the world's swabbing today. Fully patented.

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GUIBERSON

BETTER BE SAFE THAN SORRY

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Ask any contractor who has used it, if the Perfection core barrel has the right name.

The new Type M cools the bit effectively by putting circulation right on the cutting edge. Type C Perfection Core Barrels can be converted by replacing with Type M Bit Body and Cutter head which are furnished without extra cost.

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Personal Mention—Men You Know

▼ ▼ ▼

Ben Bess, gauger for George F. Getty, Inc., was burned to death February 1 at Santa Fe Springs when a tank of oil burst into flames. He was gauging a large tank of oil and a spark from the steel tape probably started the fire.

W. H. Geis, president of Arrowhead Oil Company of California, has been appointed superintendent of operations of Italo Petroleum Corporation, of which Clay Carpenter was recently appointed receiver.

E. B. Reeser president of the American Petroleum Institute and head of Barnsdall Oil Corporation, has been spending some time in California. He has been in conference with California executive, with the view of solving some of the many problems now confronting the industry.

W. E. Dunlap, formerly vice-president and manager of production for Richfield Oil Company of California, has resigned to become directing head of the Independent Petroleum Association of California.

Sidney H. Koeughan, Denver, in association with Hope Engineering Company of Mt. Vernon, Ohio, has recently entered the oil producing game in Germany, according to official announcements made in Denver this week. Mr. Keoughan was founder and head of the old Continental Oil Company, and since his retirement from the new organization, has been identified with various wildcatting operations. He has recently returned from abroad and announced his acquisition of a concession in Germany which will be operated by the newly formed North European Oil Company of which Mr. Keoughan is president. A large program of drilling is being arranged.

M. J. Bonham, scout for Continental Oil Company in the San Antonio district, has been transferred to East Texas, and has temporarily established headquarters at Marshall.

E. N. Wilson, field superintendent for Magnolia Petroleum Company in the Mexia field, has been transferred to the Rusk-Gregg County district to assume charge of drilling operations being started by the company in the Kilgore field. Wilson will locate at Kilgore as soon as accommodations become available.

H. F. Foulds, assistant to the president, Goulds Pumps, Inc., Seneca Falls, New York, has been placed in charge of all sales work. He formerly was vice-president of Servel, Inc.

E. C. Lawry, field superintendent attached to the Dallas district office, and M. E. Lyster, field engineer at Luling, Texas, have been transferred by Shell Petroleum Corporation to the Rusk-Gregg County district, East Texas, where the company is preparing to start a number of tests to protect leases from direct offsets. Territory lying north of the Sabine River will later be assigned to one of the above superintendents, while the other will have the south district.

S. E. "Red" Manning was elected president of Houston Oil Field Materials Company at a meeting of the board of directors held in the Houston headquarters February 1. Houston Oil Field Materials Company last week announced the opening of a supply store at Kilgore, near the center of the newly developed oil territory of East Texas. C. B. Graham has been appointed store manager in this district.

Hubart May, a partner in the firm of Messrs. A. Beeby Thompson & partners, London, England, died January 16. Mr. May's death removes one of the pioneer British petroleum technologists. Trained as a mechanical engineer, he early entered the oil industry and has been closely identified with oil field work every since.

LESLIE MCKAY

Leslie McKay, appointed chief deputy supervisor of the oil and gas division of the Texas Railroad Commission in 1927, started in the oil business at Thrall, Texas, in 1916, while working with the state banking department. He has served his turn as fireman, roustabout, tool-dresser and driller in Texas, Oklahoma, Wyoming, Mexico, and South America, before coming to the commission in the Laredo district in 1926.

Amos J. Mitchell, Wichita Falls, Texas, was killed January 25 in an automobile accident near Houston. He came to Texas during the Burkburnett development at which time he and Frank E. Van Wormer formed the M and V Tank Company. He was actively engaged in supply business during the past 40 years in Ohio, Indiana, Oklahoma, Wyoming and Texas. He is survived by two sisters, Miss Fannie E. Mitchell of Findlay, and Mrs. E. G. Palmer of Shreveport, and two brothers, Frank A. Mitchell of Independence, Kansas, and Donald R. Mitchell of Detroit.

Floyd C. Dodson of Ricker and Dodson, San Angelo, Texas, was in Houston this week.

L. P. Teas, geologist with Humble Oil & Refining Company, Houston, was the featured speaker February 10 at the weekly luncheon of the Houston Geological Society, discussing "The Hockley Salt Dome Caprock Contact at Hockley Salt Mine."

Dr. A. N. Murray, professor of geology at the University of Tulsa and formerly research fellow at the University of Illinois, was principal speaker at the semi-monthly technical meeting of the Tulsa Geological Society, Monday evening, February 2.

Dr. Murray spoke on limestones as oil reservoirs and advanced two exceedingly interesting observations in connection with the present commercial production from limestone. He pointed out that in his belief most oil-producing limestones are really dolomites and that most, if not all, producing horizons of this type of oil-bearing rock are associated with unconformities. Although some of the older producing areas in the Appalachian and Great Lakes regions are securing oil from limestones or dolomites, the subject was never brought to the attention of Mid-Continent geologists until oil was discovered in Arbuckle limestone in the Oklahoma City pool.

Dr. Murray cited several fields where oil is secured from dolomite or limestone in connection with unconformity and, although several of the members pointed out fields where production is being obtained from the same type of rock with no conclusive evidence of unconformity, the theory that all dolomitic production is found in connection with unconformity was not disputed. Much of the evidence gathered indicates that dolomitic porosity is secondary and that leaching probably has played a large part in the pore forming process.

Oil and Gas Pipe Line Activities

▼ ▼ ▼

Magnolia Plans Trunk Line System for Kilgore Field

Tyler, Texas.—Entrance of Magnolia Pipe Line Company into the Kilgore field, located in northwestern Rusk County, with a trunk line system is to follow with the completion of right-of-way survey now being made, thus assuring the field two direct pipe line connections. Magnolia Pipe Line Company will build a 10-inch carrier from leases now being developed by Magnolia Petroleum Company in the Kilgore field directly east to Latex station, Panola County, Texas, where connection will be made with the company's Arkansas-Louisiana-Beaumont eight-inch trunk line system. This extension line will only involve about 60 miles of pipe, and will enable the company to regain full use of its Arkansas-Beaumont system, which has been operating at part capacity several years because of insufficient crude supply.

Completion of the Kilgore-Latex line by Magnolia Pipe Line Company will be preceded by the installation of large steel storage tanks near Kilgore.

Although Magnolia Pipe Line Company's Arkansas-Beaumont system has a capacity of 25,000 barrels of high gravity crude daily, it is handling only about 7500 barrels daily. Sufficient storage is owned by the company in Arkansas and Northeastern Louisiana to withhold these shipments for months, and also permit the backing up of East Texas crudes in same should traffic congestion develop between Latex and Beaumont. The company has five 55,000-barrel steel tanks at Latex station, and two tanks of the same capacity at each of the three main line stations located between Latex and Beaumont. These stations are at about 40 mile intervals. Installation of loops along the latter unit would enable the company to handle about 40,000 barrels daily from Kilgore to Beaumont should such facilities be needed later.

In addition to taking care of the expected production of Magnolia Petroleum Company in Rusk and Gregg Counties, Magnolia Pipe Line company is reported to be negotiating for contracts to handle large quantities of crude to the Coast on a common carrier basis for other companies and operators. Such movement will involve a gathering charge of 10 cents per barrel, and a trunk line tariff of either 20 or 30 cents per barrel. An additional charge of 2½ cents per barrel will apply if the oil is loaded on board tankers for the shippers.

Humble Pipe Line Company will be the first to reach the Kilgore field with a trunk line connection, as this concern has started work on a 13-mile 10-inch welded lateral from its Van-Louisiana 10-inch carrier. This extension line connects with the Van unit at a point southeast of Longview and in the northeast part of the Avery R. Johnson survey, Gregg County. The company is erecting a pump station and two 64,000-barrel steel tanks at the latter point in order to separate oil handled from Kilgore and Van fields. Because of existing contracts on Van crude movement, Humble Pipe Line Company will not have in excess of 25,000 barrels of transportation facilities available for Kilgore crude. All crude handled by the Van carrier is consigned to the 100,000-barrel daily capacity refinery at Baton Rouge of Standard Oil Company of Louisiana, a Standard Oil Company of New Jersey unit.

Should the forecasted flood of oil materialize in Rusk and

PIPE LINE CONSTRUCTION DURING

Company—	Origin	Terminus	Type	
Ajax Pipe Line Company[1]	Tulsa, Okla.	Wood River, Illinois	Welded-seamless	Oil
Great Lakes Pipe Line Company[2]	Ponca City, Okla.	Minneapolis-St. Paul, Minn.	Gasoline	
Gulf-Union Pipe Line Company[3]	Jenks, Okla.	Spencerville, Ohio	Welded-seamless	Oil
Sinclair-Texas Pipe Line Company[4]	Oklahoma City	Coffeyville	Welded-seamless	Oil
Stanolind Pipe Line Company[5]	Oklahoma City	Payson Sta. (Shawnee)	Welded-seamless	Oil
Southwestern Gas Company[6]	Quinton	Tulsa	Welded-seamless	Natural Gas
Oklahoma Pipe Line Company[7]	Oklahoma City	Cushing	Welded	
Prairie Pipe Line Company[8]	Oklahoma City	Shawnee	Lap-weld	Oil
Phillips Pipe Line Company[9]	Valley Center, Kan. Borger, Texas	Voshell, Kansas East St. Louis, Illinois	Oil lines Welded	Gasoline
Continental Oil Company[10]	Oklahoma City	Tonkawa, Okla.	Welded-seamless	Oil
Prairie Pipe Line Company[11]	Oklahoma	Raymond, Kansas	Welded	Oil
Cities Service Gas Company[12]	Voshell, Kan. Oklahoma City	Perry, Okla.	Welded	Natural Gas
Shell Pipe Line Company[13]	Oklahoma City	Ray Sta. (Guthrie)	Oil	
Skelly Oil Company[14]	Voshell, Kan.	Arkansas City, Kas.		
Texas-Empire Pipe Line Company[15]	Voshell Lima, Okla.	Valley Center Chicago	Oil Welded and Coupled	
Gulf Pipe Line Company[16]	Chambers Sta., McAlester, Okla.	To Red River	Welded	Oil

[1]Completed 1930.
[2]Completed Ponca City to Kansas City Jan., 1931.
[3]To be completed in 1931.
[4]Completed 1930.
[5]Completed 1930.
[6]Completed 1930. Will add compressor stations in 1931 or 1932.
[7]Completed 1930.
[8]Completed 1930.

News of the Natural Gas Industry

▼ ▼ ▼

Gregg Counties, both Magnolia Pipe Line Company and Humble Pipe Line Company will probably later find it necessary to build their second lines to the Corsicana-Mexia district, where connections could be made with existing trunk lines to the Gulf Coast by laying less than 100 miles of new line.

Weiser, Idaho.—The gas wells which have attracted so much attention in this territory recently have not been gauged. Mountain States Oil & Gas Company's Daniel 2, eight miles south of here and seven miles northeast of Payette, is variously estimated as good for from 5,000,000 to 30,000,000 cubic feet. The company is reported to be ready to start another test to the producing horizon, encountered at 1995 feet. The company's discovery well, Daniel 1, has never been completed because of mechanical difficulties. The gas well at Payette is now being drilled deeper. Plans are progressing for tests on other structures, including Indian Head, Little Willow, and Malheur Butte.

Texas Uses 185 Billion Cubic Feet of Gas Yearly

Reports compiled by the Texas Railroad Commission on production and utilization of natural gas in the state, show that on October 31, 1930, there were 2001 gas wells in the state operated as such, having an average daily open flow capacity of 20,049,249,000 cubic feet, and total withdrawals for the year were 215,887,368,000 cubic feet. These figures do not include gas accompanying oil from wells rated as oil producers.

Latest figures on consumption of natural gas in Texas cover the year ending December 31, 1929, as follows:

	Meters	Cubic feet used
Domestic	490,714	39,943,196,000
Industrial	11,232	127,445,477,000
Field use and miscellaneous	.....	18,428,395,000
Total	501,946	185,817,038,000

Because of new communities reached and extension of service in those already served, consumption of gas in Texas should show a big increase in 1930 over the figures shown above.

Daily exports and imports of natural gas from and into Texas as of October 31, 1930.

Exports

Exported by—	To	Cubic Feet
Canadian River Gas Company	Colorado	32,985,000
Cities Service Gas Company	Kansas	85,000,000
Consolidated Gas Utilities Company	Oklahoma	17,500,000
South Plains Gas Company	New Mexico	414,000
Public Service Corporation of Texas	Oklahoma	90,000
Texas-Louisiana Power Company	Oklahoma	3,066,000
South Texas Gas Company	Monterrey, Mexico	4,986,000
Texas Border Gas Company	Nuevo Laredo, Mexico	363,000
Reserve Natural Gas Company	Louisiana	8,447,000
Lone Star Gas Company	Oklahoma	1,049,266
Total exports		156,900,266

Imports

Imported by—	From	Cubic Feet
El Paso Natural Gas Company	New Mexico	18,000,000
United Pipe Line Company	Louisiana	40,000,000
Arkansas-Louisiana Pipe Line Co.	Louisiana	36,000,000
Lone Star Gas Company	Oklahoma	7,711,466
Total imports		101,711,466

1930 — OKLAHOMA AND KANSAS

Units	Length Miles	Size
Entire line (Double 10")	412	10"
Barnsdall, Okla.-Des Moines, Ia.	415	8"
Des Moines-Chicago	337	6"
Entire line	760	10"
Entire line	165	12"
Entire line 10" loop 8" line previously constructed	35	10"
Quinton-Wainwright	35	16"
Wainwright-Muskogee	16	10"
Entire line	52	8"
Entire line double 8"	30	8"
	35	8"
Entire line	740	8"
	81	8"
Entire line	50	8"
Entire line	50	29"
	30	6"
	73	4"
	40	6"
	755	8"
Loop	37	8"
Chicago-Milwaukee	90	4"
Des Moines-Minneapolis	261	6"
Lester, Ia.-Omaha (lateral)	115	4"
Tulsa-Sand Springs	2½	10"-12"
Wainwright-Tulsa	51	14"
Sapulpa lateral	½	6"

Line constructed 1929. Eight new stations added during 1930.

Oklahoma	Length Miles	Size
Ponca City Barnsdall	53	6"
Ponca City-Okmulgee	65	6"
Okmulgee-Muskogee	32	4"
West Tulsa lateral	2½	12"

Stations Number	Type of Power	Number Engines
9	Diesel 500 hp Reciprocating pumps	27
20	Diesel Horiz. Duplex Recip. pumps	42
13	Diesel-oil Dublin, Ind. 4 units. All other stations 2 units each.	28
2	Electric motors	2
1	Electric Recip. and centrifugal pumps.	5
None	Operated under well pressure.	
1	Electric motors Reciprocating pumps.	2
1		
1		
8	Diesel Butane burning centrifugal pumps.	24
1		
2	Gas Engines.	
1		
2		
2		
19	Electric and Diesel centrifugal and reciprocating pumps.	

[9]Building.
[10]Expect to complete February, 1931.
[11]Completed 1930.
[12]Completed 1930.
[13]Completed 1930.
[14]Completed 1930.
[15]Completed 1930.
[16]Completed 1930.

Benefits From Proration of Pipe Line Outlets In Flush Fields

(*Continued from page 28*)

barrels of oil at a total lifting cost of $146,763 or $.024 per barrel, which figure also includes production tax.

Total cost of the seven wells was $111,434.13, an average of $15,919.00 each and the cost of lease lines and tanks and other production facilities totaled $72,608.70. The total development cost of the lease has been $184,042.00.

If drilling had been unrestricted, it might be conservatively assumed that now after a lapse of more than three years we would have drilled a well to each 10 acres, a total of 40 wells and required fully four times the production facilities now needed. Using the above figures for our basis of cost, it would have caused an additional cash outlay totaling $743,150.00 and would have been entirely needless.

Howard-Glasscock Problems

We own 120 acres in the pumping area of Howard-Glasscock field. Our first well was completed one year ago and we have considered our lease as developed after the completion of Number 6 well. To November 30 we have produced 251,415 barrels at a total lifting cost of $17,862.00 or five cents per barrel including production tax.

The total cost of the six wells was $170,816.99. Production facilities cost $30,504.29. With development unrestricted it can be assumed that it would have been necessary to drill a well to each 10 acres, or twice the number we have drilled and production facilities would have been at least 50 per cent greater. Therefore, we feel we have saved in development costs a total of $186,069.00. And, as in the Yates pool, these additional wells can not be assumed to have entitled us to a greater market outlet, as offset leases would likewise have been so developed, but would have greatly increased our lifting costs.

In the very recently developed Penn pool in Ector County, which has been under proration practically since its beginning and where we first obtained production on a 160-acre lease late in April, 1930, we have found it necessary to drill only four wells to date. To November 30, 1930, the lease had produced 156,784 barrels of oil at a total lifting cost, including production tax, of $7,391.00 or 9 4/10 cents per barrel. Production here is found at a depth about 3700 feet, making development costs very high. Our four wells were drilled at a cost of $145,415.44 and production facilities cost $42,923.00. The average cost of the wells, therefore, was $36,353.86. As our lease is only 40 acres wide, without proration, we would surely have had to drill an offset well on each 10 acres, a total of 16 wells against only four we have drilled so far. Assuming lease lines and tanks and other production facilities would necessarily have been 100 per cent greater, the 12 additional wells would have made necessary an expenditure totaling $449,169.00 more than we have spent in the present development of the lease. And yet, as in the two other examples mentioned above, we would probably have not shared to a greater extent in the pipe line outlet, and would not now be enjoying such low lifting costs. We operate this lease with only one full time man and one-half the time of another.

Our 400-acre lease in the Yates pool is satisfactorily operated with a foreman, one pumper and a roustabout. The 120-acre pumping lease in the Howard-Glasscock pool is operated with a foreman and pumper. We recognize and give full credit to proration for the low labor and lifting costs with which these properties are producing.

From the above it will be noted that our estimate of the saving in the invested capital in these three distri·ts amounts to $1,378,388.00; an investment that would not have increased the pipe line outlet one barrel, but on the other hand would have increased our lifting costs.

In addition to the very tangible evidences of money to be saved through the orderly development of a lease and without unnecessary repetition of drilling and production facilities, there is also to be gained the undisputed fact that steady, equal withdrawals, together with properly maintained oil-gas ratios, will bring about a large increase in the ultimate production of the properties. Uncontrolled production, resulting in the dissipation of gas and coning of water, may be expected to create much waste that under proration would be avoided.

We find in counting our advantages: 1. a decrease in capital invested; 2. a decrease in operating costs; 3. an increase in ultimate recovery; and, 4. less demoralization of crude oil prices.

It is declared by some people that the advantages claimed for proration are theoretical. While we agree, of course, that the savings in some specific instances must be estimated, still we have more or less parallel developments that were not prorated, but were developed in haste in order to obtain the largest share possible of the recoverable oil, yet in the final analysis we found most of the revenue was eaten up in development, lifting and pipe line expenses.

Comparative Data

For example we own a one-half interest in approximately 420 proven acres in the Crane field, which compares with the 414-acre lease we own in Yates field, and I would like to quote a few comparisons.

	Months	
Age of our Crane production	48	
Age of Yates production	39	
Barrels oil produced at Crane		5,022,288.00
Barrels oil produced at Yates		6,027,496
Lifting expense at Crane		$ 398,600.00
Lifting expense at Yates		146,763.00
Wells drilled at Crane	37	
Wells drilled at Yates	7	
Cost of wells at Crane		$ 656,593.00
Cost of wells at Yates		111,434.00
Cost of production facilities—Crane		123,230.00
Cost of production facilities—Yates		72,608.70
Cost of pipe line system and 55,000-barrel storage tanks at Crane plus pipe line expenses		530,266.00
Same item at Yates		62,854.00
Profit from operations at Crane		1,061,181.00
Profit from operations at Yates		3,025,470.00

The above figures argue very strongly against fast competitive development where adequate pipe line facilities are not available.

As shown above we have produced over 5,000,000 barrels of oil at Crane at a profit approximating only 20 cents per barrel, while at Yates 6,000,000 barrels have been produced at a profit of more than 50 cents per barrel and yet the latter lease has shown little or no sign of diminishing its productive potentialities while the former was rapidly depleted.

And in order to figure we have made $1,000,000.00 in our operations at Crane, it is necessary to value at posted price, 1,091,476 barrels of oil that we had to produce, pay royalty on, and then store in order to protect our properties.

So it might be said that after four years of operations in one of the major West Texas fields, which was not prorated we have just about broken even, although we feel our operations are comparable with other operators in the field. While our experience in the most drastically prorated field in the country has shown handsome profits.

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Proper Practice for Handling Various Cementing Jobs

(*Continued from page* 32)

of fluid and packed off as well as the space between the tubing and the oil string.

Plugging Back to Shallow Sands

Quite often it is found that before abandoning a deep well it is advisable to test shallow "showings" which have been cased off behind the water string. This particular type of job is often difficult to handle, due to insufficient accurate geological data, also a lack of proper drilling data on old wells, so that failures to get results with cementing in such cases may be due to inaccurate information more than the cementing methods themselves.

Taking simple cases where the shallower sands are below the water string, the procedure will be the same as for plugging off bottom water, already described. When the desired sand is behind the water string considerable difficulty may be experienced in getting a water shut-off unless provisions have been made while drilling the well for producing from the upper sands.

It will first be necessary to plug off any bottom water in the hole. Assuming that the sand to be tested is behind the water string in an uncemented portion of the hole, it will then be necessary to get a water shut-off both above and below the sand.

A bridge is built up to a few feet below the point where it has been decided to bottom the cement. The casing is then perforated at this point and an attempt can then be made to establish circulation. If circulation is established the desired amount of cement, to fill up to near the shallow production sand, is then run and forced through the perforation. This is done either by a casing or tubing method. After the cement has set the casing should then be perforated above the producing sand and circulation again established. Cement is then pumped through the perforations and allowed to set, thus shutting off water and caves above the sand to be tested. The casing is then perforated at the sand.

This type of job may be handled in several different ways. The whole section of casing just above and below the sand can be perforated at one time and the job handled as though cementing through a perforated liner or oil string. The method of handling will depend on the experience of the operator in the particular locality where the work is being done.

7. Miscellaneous cementing jobs

(a) Plugging back crooked holes.

(b) Cementing caves.

(c) Porous formations.

(d) Cementing off sidetracked tools.

(e) Plugging wells for abandonment.

These jobs necessitate the running of cement plugs, and are similar in that respect. The methods of handling them are the same as for plugging off bottom water, already described.

Cement and Cementing—Conclusion

From this report it will be seen that there are certain fundamentals which must be taken into consideration in all oil well cementing work.

1. Cement, regardless of the type used, should be free from lumps and as fresh from the mills as possible, and should be carefully stored to prevent deterioration. The selection of the type of cement used will depend upon the conditions imposed by the particular job.

2. Whether accelerators are used, or not, will depend upon the setting time of the cement and the time necessary to complete the job under the temperature condition of the circulating fluid and the hole itself.

3. The cementing method used will be determined by the conditions of the job to be done, and the equipment available to do it with.

4. It is necessary that whatever surface or underground equipment is used be in good condition, as delays occasioned by breakdowns are dangerous both to the ultimate strength of the cement and to the well itself.

5. All cement jobs should be properly supervised by experienced men. While the cement crews, drillers, etc., may have had a great amount of experience in the work, it is impossible for them to run the cement and keep an accurate check on all the details at the same time.

6. An accurate engineering report should be made on all cement jobs for filing purposes. It is only by past experience that we can hope to improve our methods on future jobs, so that records are of extreme importance. A suggested form for such purposes is included in this report.

7. It should be remembered that while a vast amount of research work has been done on concrete, there has been practically nothing done outside the oil industry on neat cement under conditions which approximate those found in oil well work. A suggested outline for such work would include investigation of its behavior under the following conditions before setting, and its strength after setting. These tests should include different types and brands of cements.

(a) Water-cement ratios from 4½ to 6½ gallons per sack.

(b) Temperatures from 70° to 200° F. with and without accelerators.

(c) Pressures up to 4000 pounds.

(d) Agitation up to five hours.

(e) Contamination by exposure to such impurities as oil well salt water, sulphur water, oil and rotary mud.

In addition, the following investigations would be very valuable:

(a) Investigation of suitable retarding agents.

With the ever increasing depths to which we are drilling and the higher bottom hole temperatures encountered, the use of a satisfactory retarding agent is becoming necessary.

(b) A suitable method for quickly determining the deterioration of dry cement.

With the growing need for cement of the best quality, a suitable method for rapidly determining whether a dry cement had deteriorated sufficiently to injure it, would be valuable. When cement has been purchased it is often difficult to know the amount of deterioration which has taken place in the cement. A practical field method for this purpose would have to be one which could be run in a few hours with simple instruments. The marking of the date of manufacture or sacking on each sack by the manufacturer would help considerably.

Summed up, there has been a great improvement in cementing practice since cement was first used to exclude water from oil wells, but the improvements have practically all been mechanical. It is now time that we investigate the behavior of the cement itself.

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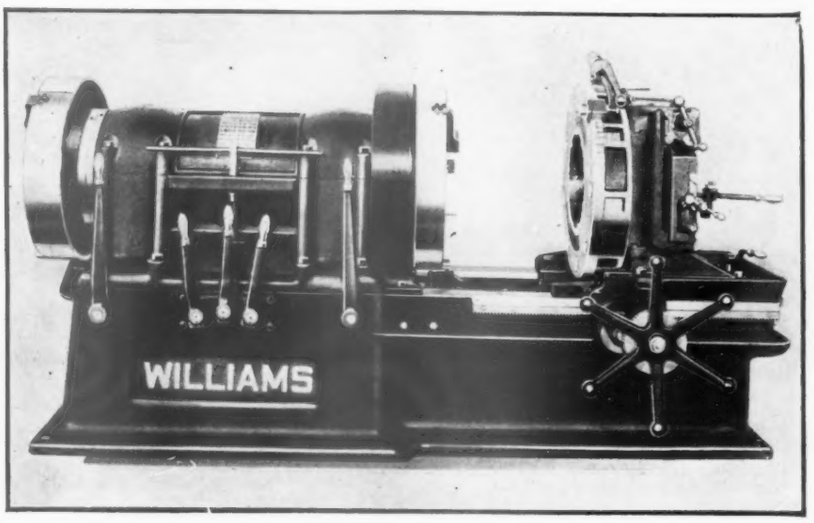

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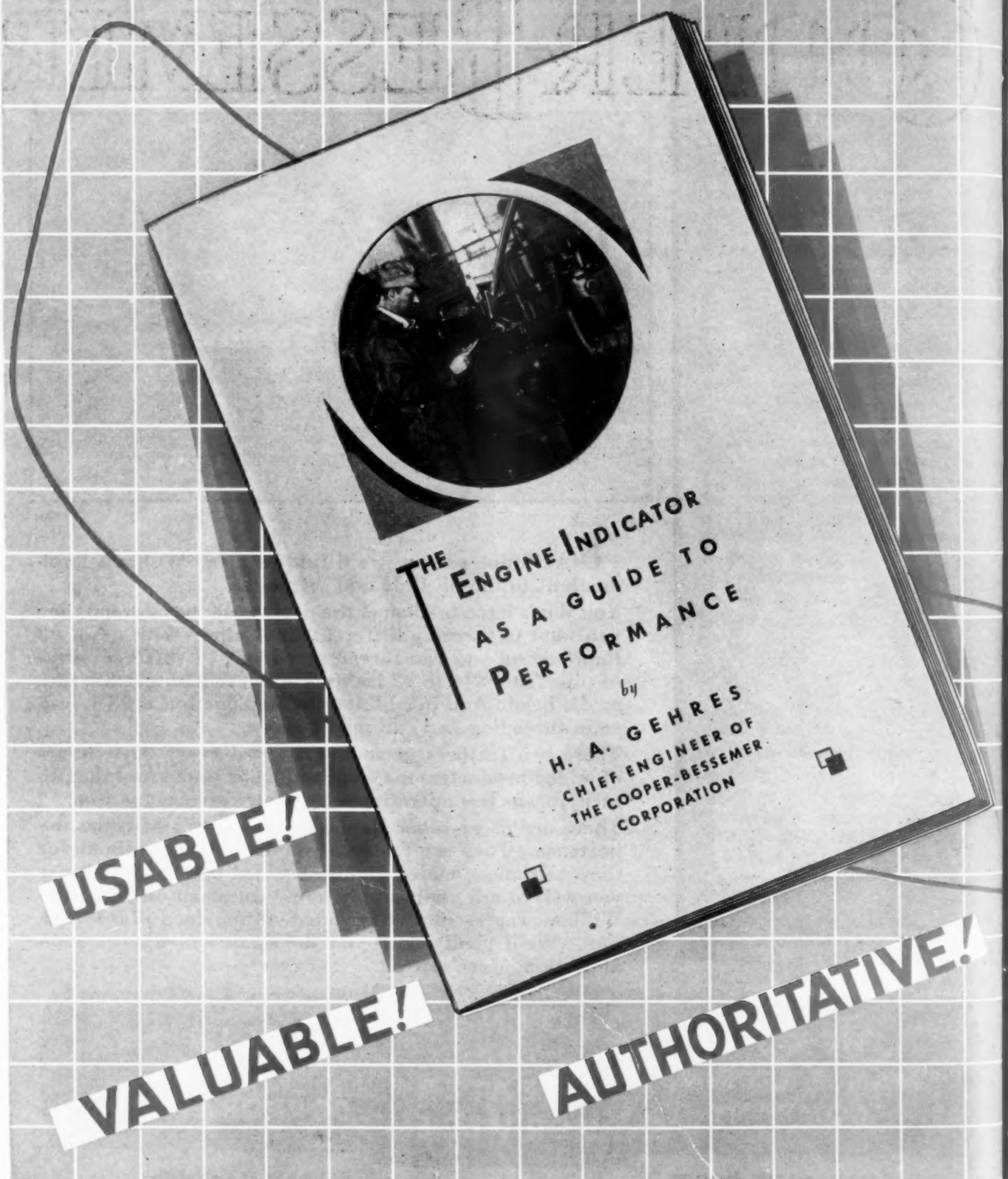

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Playa del Rey Operators Concentrate on Deep Zone

Los Angeles.—Operators at Playa del Rey are concentrating on the deep zone in the southern part of the field but completions probably will not more than offset the natural decline.

The intense activity of several months ago in the townlot district is now conspicuously missing and predictions that drilling would stop as quickly as it started seem to have been correct. The total number of active wells has dropped to 35, of which those headed for the deep zone include a greater percentage of the total than at any time since the middle of 1930.

Of the five completions recorded during the past two weeks, four have been finished in the deep zone. The shallow zone did not fail to yield commercial production on the best townlot tracts, but the initial flow was low.

There is still a possibility of significant deep zone developments, but the field seems limited in districts which are open to drilling by smaller operators.

Temporarily Suspend Work on Huntington Beach Deep Test

Huntington Beach, Calif. — Superior Oil Company has temporarily suspended operations in Fee 1, most important deep test in the Huntington Beach field, but is expected to conclude another production test within a short time. The well was drilled to 7491 feet and a string of 4¼-inch casing run for another production test. In cementing through perforations the most promising body of sand was included below the level which failed on the original test.

This is a very important deep test and a successful completion would lead to extensive drilling operations. W. E. McCaslin is drilling at 7150 feet in No. 17 and an increasing gas pressure indicates that the formation below may carry oil. A string of 4¼-inch casing was cemented at 6880 feet and a water shutoff obtained.

Baldwin Hills Wildcat Well Ready for Production Test

Los Angeles.—Streaks of oil sand have been cut in Baldwin Hills 1, a wildcat being drilled northeast of the Inglewood field by the E. K. Allison Syndicate, Section 8-2-14, and drilling may be stopped at about 5160 feet for a production test. Cores taken around 5100 feet showed shale and streaks of oil sand. A string of 8⅝-inch casing was cemented at 4920 feet and only limited preparations will be needed for a production test.

The Inglewood field is a very compact, well defined structure in the shallow zone but may prove larger in the deeper formations. A productive sand below the principal zone now producing is known to exist.

The E. K. Allison Syndicate's Baldwin Hills 1 failed to find oil in commercial quantities at any level which corresponds to the producing zones within the field.

Coal Oil Point Wildcat Assumes Doubtful Status

Santa Barbara, Calif. — Bolsa Chica Oil Corporation's Augur Permit 191-1, a wildcat test off Coal Oil Point, has assumed a more doubtful status, and there is a possibility that another well will have to be drilled to determine the true possibilities of the ocean structure. The well was definitely wet on the most recent production test. A plug was set at 4155 feet, after drilling to 4191 feet, but apparently the plug failed to hold. The top of the Vaqueros was found at 4020 feet and a string of nine-inch cemented at that point. Cores for more than 50 feet showed an almost unbroken oil sand, but questionable streaks made their appearance considerably above the level at which the plug was set.

It is still impossible to tell whether the water is coming from a point below the plug or above it. Experience has shown that the setting of a plug at a definite level where the formation is chiefly sand is a difficult task. Where alternating shale bodies are present, the plugging back operation is simplified. If only the top of the zone had been included, commercial production might have been obtained.

Mechanically the hole is not in as good condition for further operations as it was before the original production test. The well may be slightly off structure, although the original geology indicated a very favorable location.

Flow of Coalinga Well Shows Steady Increase

Coalinga, Calif.—Petroleum Securities Company's Felix 2 has increased its flow to 5400 barrels of 37.4 gravity oil from a total depth of 8100 feet, following a much smaller initial production. Gas production has been held to the remarkably low daily total of 5,000,000 cubic feet, giving the well the record gas-oil ratio for the entire field. The oil shows the minimum cut of one-tenth of one per cent, an unusual showing for such a thick body of producing formation. As production of oil increased, the flow of gas decreased. A string of 5¾-inch casing was run to 7425 feet but no special flow string was run. The well is producing under adverse mechanical conditions and might do much better under more favorable circumstances.

The company's Felix 2 has been killed for deepening, after producing without interruption for nearly a year. It was originally completed at 7275 feet with an initial production of 1500 barrels, but gradually declined to a flow of 240 barrels.

Standard Oil Company is circulating at 7727 feet in No. 29J-35, an offset to Superior Oil Company's Huffman 1, but may not be able to complete the well for some time. Other wells drilling below 5000 feet include Associated Oil Company's Whepley 2 at 5200 feet, Continental Oil Company's Elliott 2-16 at 6300 feet, Milham Exploration Company's No. 1 at 6000 feet, North American Consolidated Oil Company's Blauvelt 1 at 5625 feet, Pacific Western Oil

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Company's No. 12 at 6465 feet, Petroleum Securities Company's Felix 3 at 6150 feet, Shell Oil Company's Dixon 1 at 7050 feet, Standard Oil Company's No. 35J-47 at 6250 feet and No. 3P-32 at 6200 feet, Superior Oil Company's Huffman 2 at 6300 feet and Union Oil Company's Amerada 1 at 5800 feet.

Kettleman Hills Unit Plan Will Not Include All Area

Los Angeles.—Some form of a unit plan of operation is assured for Kettleman Hills, although it is openly conceded that much of the fee land will never be brought under the provisions of the agreement. Secretary of the Interior, Ray Lyman Wilbur, approved the plan two weeks ago and the operators who enter the association probably will not worry about the development of companies outside the agreement. All holders of government permits have signed the unit plan, but several parcels of fee land are still outside the fold. Superior Oil Company, Union Oil Company, Petroleum Securities Company have not signed the plan, while Associated Oil Company and Shell Oil Company are working on a plan which will permit them to sign unconditionally. A meeting will be held next week for the election of permanent directors for the Kettleman North Dome Association, which will be the organization under which the plan will operate.

Ventura Avenue Well Good For 1500 Barrels Daily

Ventura, Calif.—Associated Oil Company's V. L. W. 17, completed this week in the Ventura Avenue field with an initial production of 1500 barrels, was one of the best wells finished in some time and demonstrated the value of conservative development. The well was drilled to 7347 feet and a string of 10¾-inch casing cemented at 5960 feet. A seven-inch oil string was landed at 7321 feet and included 1270 feet of perforated, which was cemented through perforations at 6050 feet.

Although not an exceptionally large completion, the well is a much better producer than might be expected in the average field of the same age. Shell Oil Company and Associated Oil Company are the principal operators and have widely spaced their wells to obtain best results.

Los Angeles.—McKeon Oil Company has abandoned Sunny Side Heights 1, a wildcat test about midway between the Athens-Rosecrans and Potrero fields, at 5620 feet. The formation was running to brown shale when drilling stopped but even this favorable indication did not offset the failure to find a more promising zone above 5600 feet. Streaks of oil sand were cut at various levels and small gas pockets cut, but no particular level was worthy of a production test. The district between Athens-Rosecrans and Potrero has favorable surface indications, but its proximity to the two fields may account for the lack of an accumulation.

Santa Barbara, Calif.—Barnsdall Oil Company and Rio Grande Oil Company have cored streaks of oil sand in Bishop-Evans 1, a wildcat test just outside the Elwood field, intermittent layers which showed a cut having been found between 4150 feet and 4300 feet. Commercial production at this point would extend the field more than 4000 feet. Wells drilled about 6000 feet east of production failed to produce at any depth, one having been drilled to about 6000 feet.

Good Dominguez Producer Revives Interest in Area

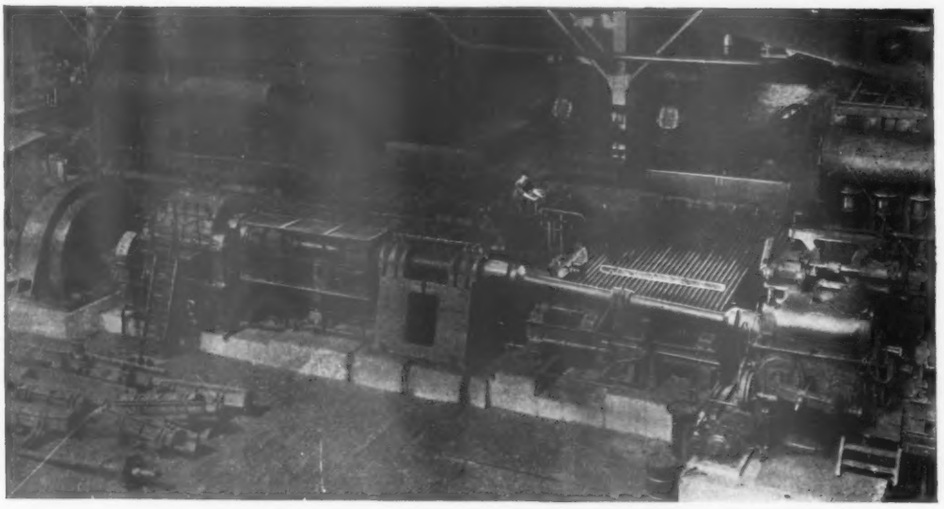
Los Angeles.—The Dominguez field, for several years one of the quietest districts in the Los Angeles basin, attracted considerable attention during the past week, with the completion of Associated Oil Company's De Francis 12 as a 4600-barrel producer. The well was drilled to 4667 feet and plugged back to 4584 feet. A string of 10¾-inch casing was cemented at 4275 feet and 6⅝-inch liner landed on the plug at 4584 feet. The well is favorably located in the field but such a large flow was unexpected. Shell Oil Company, Associated Oil Company and Union Oil Company principally control the field, which has been referred to as a model of development. Union Oil Company and Shell Oil Company combined to store gas in the field for several years, but suspended the practice some time ago. Associated Oil Company was never a party to the repressuring arrangement.

Lost Hills Test Shows Water Below 5000 Feet

Bakersfield, Calif.—The most recent test in Universal Consolidated Oil Company's No. 49, a deep well in the Lost Hills field, indicated that the zone below the final shutoff contained water and no further attempts will be made to obtain production around 5000 feet. A string of 6⅝-inch casing was cemented at 4960 feet and the well drilled to 5006 feet. The action of the water flow pointed to an unsatisfactory sand condition and the well will be deepened until a more favorable formation is encountered. Since the Temblor was supposedly found at a higher level than expected, there is still a possibility of more favorable developments. The Lost Hills field apparently holds much promise in the Temblor zone, but the fact that both Kettleman Hills and North Belridge are producing from this formation should not be construed as proof or definite evidence that the Lost Hills field will be productive from the same sands.

Ventura, Calif.—Two unusually deep wildcats are being watched in Ventura County, both being located only a short distance from proven fields. They are Chanslor-Canfield Midway Oil Company's Hobson A2, which is drilling at 8150 feet, and Prairie Oil & Gas Company's Sexton 1, now coring ahead at 8550 feet. The former is about two and one-half miles east of the Rincon field, while the latter is near the Ventura Avenue field. Hobson A2 produced oil from 7479 feet on a recent test, but the flow was two low for a well of such great depth. Continental Oil Company is building a rig to offset the well.

Bakersfield, Calif.—Ohio Oil Company is coring at 5425 feet in Bloemer 1, a deep test in the southeast part of the North Belridge field, but has failed to find the Temblor zone. The formation is running to a hard brown shale, indicating the structure takes a much sharper plunge toward the southeast than originally thought. Richfield Oil Company is considering another production test in Belridge 1, which was drilled to 6640 feet and shut down with a string of 6⅝-inch casing cemented at 6255 feet. The hole was plugged to 6405 feet.



Pictured above is the first piercer in the J & L No. 2 Seamless Tube Mill at the Aliquippa, P.., Works. One of the solid round billets, white hot, from which J & L Seamless Pipe is made, may be seen rolling down the skids, to enter the machinery in the right foreground, to be converted into tubular form. Compare the size of this powerful machinery with the operator, at his controls, in the center of the picture.

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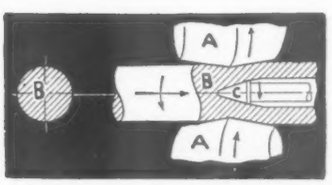
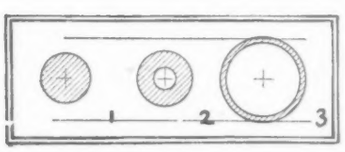


Sketch shows in cut-a-way view, the operation of the first piercer. The rolls, "A," carry the solid round billet, "B," over the piercing point, "C."



Development of cross section in the manufacture of J & L Seamless: 1. Before piercing; 2. After first piercing; 3. After second piercing.

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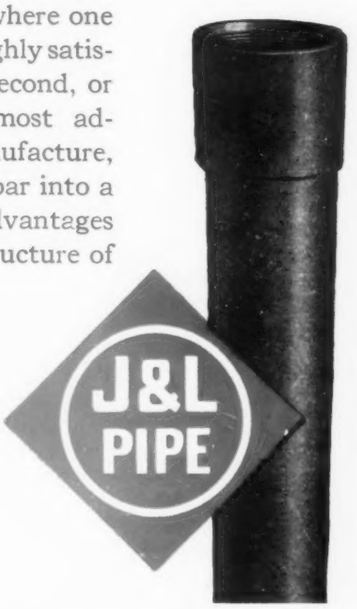

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Oklahoma--Kansas Field Notes

FLOYD SWINDELL, *Staff Representative, Tulsa, Oklahoma*

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Four Wells Completed in Quiet Oklahoma City Week

Oklahoma City.—The Oklahoma City pool had a comparatively quiet week with four wells completed and three locations announced. Phillips Petroleum Company's Walnut Grove 1, NE NE NW Section 3-11n-3w, first producer in the west half of the section, flowed 10,549 barrels in four hours against 350 pounds back pressure. Wilcox sand was topped at 6288 feet and Simpson formation penetrated to 6480 feet. Slick and Phillips Petroleum Company's Owens 1, NW SE SE, of the same section, produced 8363 barrels in four hours from 169 feet of Simpson formation. Top of the Wilcox was at 6230 feet and total depth 6401 feet. Mabee Drilling Company and Tidal Oil Company's Reynolds 1, SE NE NW Section 10-11n-3w, topped the Wilcox at 6342 feet and produced an estimated 4244 barrels in 2½ hours at a total depth of 6379 feet. Dengail Oil Company's Woodson 1, NW SE NE Section 10-11n-3w, produced 3356 barrels the first two hours from Wilcox sand topped at 6275 feet and penetrated to 6475 feet.

Test in Seminole District Attracting Wide Attention

Tulsa.—Empire Oil & Refining Company and others' Scroggins 1, SW SE SE of Section 20-7n-8e, Seminole district, had top of the Sylvan at 4125 feet and Viola limestone at 4152 feet. A core between 4157 and 4167 feet revealed no show of oil. The test will be cored from that point to the Wilcox. It is of special interest because of being located approximately midway between two dry Wilcox tests. Magnolia Petroleum Company's Coker 1, NW SW SE of Section 35-9n-5e, wildcat test between the South Earlsboro and Carr City pools had a hole full of water in the Wilcox sand topped at 4707 feet. This test was structurally low and will be abandoned. J. E. Crosbie and others' Brown 1, NE NW SW of Section 2-9n-4e, wildcat test three miles west of Earlsboro is drilling below 2720 feet. Structural position of the well cannot be determined at this time because of the distance to the nearest test which has encountered Bell City lime.

Two important tests are drilling at interesting depths in the Carr City pool. Gypsy Oil Company's Lizzie Coker 1, in the SW SW NE of Section 2-8n-5e, on the northeast edge of the pool had top of the Woodford at 3850 feet and is drilling below 3870 feet. Magnolia Petroleum Company's Harjo 1, in the SE NW NW of Section 2-8n-5e, northermost test in the pool had top of the Woodford at 3790 feet and is drilling below 3870 feet. Amerada Petroleum Corporation's Tiger 4, in the NW SE SW of Section 3-8n-5e in the west extension to the Carr City pool drilled a plug and was cleaning out with a show of gas. Total depth is 4030 feet in the Viola lime at which point operators are running six-inch casing.

Magnolia Petroleum Company's Harjo "A" 3, in the NW NE NE of Section 14-7n-6e, produced 100 barrels of fluid cutting 25 per cent along with an estimated 3,000,000 feet of gas. Water is decreasing and operators believe that it is coming from behind the five-inch casing which was set at 3195 feet; total depth is 3205 feet. This is inside test in the old Cromwell pool. The same company's Harjo 1, SW NE NW of Section 6-5n-6e, 1½ miles southwest of the Cromwell pool was coring at 2466 feet in black shale at last report. This test has been cored almost continuously from 2111 feet to the present total depth and a show of oil was encountered in green sandy shale at 2111 to 2117 feet and at 2207 to 2217 feet.

Tulsa—Oklahoma Corporation Commission has issued an order changing Oklahoma City production to 6¼ per cent of potential, which is estimated at 2,000,000 barrels daily. The output under this ruling will be 125,000 barrels daily, as against 85,000 barrels, and is effective for the remainder of the first quarter of 1931.

Proration Abandonment in Voshell Pool is Inevitable

Wichita, Kansas.—Potential tests during the five days of February in the Voshell pool are strongly indicative of abandonment of proration. The daily runs from 96 wells were as follows:

	Barrels
February 1	31,159
February 2	29,095
February 3	26,302
February 4	24,972
February 5	24,774
Total	137,302

This is an average of 27,460 barrels daily. Daily potential from Sinclair Oil & Gas Company's properties was 3991 barrels, nine barrels under the amount that the company has nominated to take from its own properties. The proration agreement in effect has been based on the rule that the amount of production allowable would be based on the highest per cent of potential taken by any producer. This indicates that Sinclair Oil & Gas Company will take full potential and therefore entitle any other operator to do the same. Most of the owners of producing properties will be unable to secure sufficient outlet to take care of full production.

Proration was removed in the Greenwich pool in northeastern Sedgwick County and all wells will be permitted to produce full capacity as near as the market demand will permit. This pool was discovered by Roxana Petroleum Company in the early part of 1929 and has production in the Viola and Wilcox horizons; 14 wells are expected to produce approximately 5000 barrels daily since all restrictions are removed.

One of the most interesting tests in western Kansas and the only one of any consequence in Rice County is that of Muth Brothers' on the Byers 1, NE NW Section 21-19s-9w, approximately seven miles northeast of the Raymond-Schurr pool. Top of the Siliceous lime was encountered at 3213 feet. At 3219 feet there was 500 feet of oil in the hole and at 3225 to 3235 feet the fluid level raised to 1800 feet in 16 hours. Present total depth is 3244 feet where operators bailed 275 barrels in 6½ hours with the hole filling at the rate of about 16 barrels per hour. Gravity is 44 degrees A.P.I., corrected to 60° F. The well is located about three miles south of Tatlock et al's Ploog 1, discovery well in Section 35-18s-9w, which came in flowing an estimated 5000 barrels. Reserve Oil Company et al had 3200 feet of fluid in the hole about 100 feet of which was water in their Ritz 1, SE SE SW Section 31-19s-1w, in the

Ritz pool. Total depth is 3400 feet in Viola. It will be tested on the swab. Dickey Oil Company's Williams 1, NE NE NW Section 26-19s-2w, is digging cellar and pits and Wakefield Oil Company and Shell Petroleum Corporation's Koehn 1, NE NE NW Section 36-19s-2w, is a machine on location. Ostot et al announced location for Kaufman 1, NWc SW Section 15-21s-2w.

Prairie Oil & Gas Company and Slick Estate's Hefferman 1, SW SW NE Section 26-15s-13w, had top of the Siliceous lime at 3226 feet and swabbed 300 barrels of oil in 18 hours from a total depth of 3346 feet with no water showing. It is a west offset to Signal Oil Company's Sellens 1, SEc NW, of the same section, a 400-barrel well which was completed at 3249 feet on November 12, 1930, and is offset to the south by Prairie Oil & Gas Company's Sellens 1, which came in as a 400-barrel producer at 3365 feet. Two small producers and one dry hole have been completed in Section 36 to the southeast of it.

Tulsa.—The southwest limit of Wilcox production in the Wewoka townsite pool apparently was defined during the last few days when Deep Rock Oil Corporation's Douglas 3, (60 acres) NE NE SW of Section 30-8n-8e encountered a sand phase at 4197 feet and pure Wilcox sand at 4201 feet. A core between 4201 and 4209 feet revealed indications of salt water and no oil showing. This test is offset to the south, southwest and west by Cromwell production and to the northeast by Wilcox production. Mid-Kansas Oil & Gas Company's Davis 4, NW SE NW of Section 30-8n-8e, northwest offset to the Douglas 3, had the Viola lime at 3880 to 3910 feet and was preparing to run eight-inch casing. Burke-Greis Oil Company's Henshaw 1, NW NE SW of the same section had the base of the Booch sand at 2921 feet at which point it flowed 60 barrels in 11 hours. It is drilling below 2945 feet in shale. Deep Rock Oil Corporation's Douglas 4 (50 acres), in the SE SE NW of Section 30-8n-8e had 18 feet of Wilcox sand at 3930 to 3948 feet and produced 9570 barrels in the first 24 hours. The last few feet of deepening gave no increase in production.

Tulsa.—George Pace's Watkins Estate 8, NW SE NE SE Section 21-2s-7w, two miles east of the town of Comanche in Stephens County, is estimated at 250 to 300 barrels from sand topped at 1722 feet. Location has been staked for the same operator's Watkins 9, NE SE SE, 370 feet southeast of the Watkins Estate 8. Approximately one-half mile southwest of the new Pace location, Cooper et al have completed derrick on their Duncan 1, NW NW NE Section 28-2s-7w. A. L. Andree et al are drilling below 1850 feet in their G. S. Patrick 1, C NL SE SE Section 3-3s-8w, wildcat test about three miles west and two miles south of Comanche. Crane and Rankin's Adkins 1, NE NE SE Section 14-1n-9w, wildcat just north of the Oil City pool, is drilling below 2760 feet in lime.

Tulsa.—Twin State Oil Company's Archer 4, in the NE NW SE of Section 22-6n-3e, on the west edge of the Wanette pool set eight-inch casing at 3537 feet, and is drilling below 3550 feet. Sand should be encountered between 3580 feet and 3600 feet. On the northeast edge of the pool Gypsy Oil Company's Horn 4, NE NW NE of Section 23-6n-3e had top of the Bell City lime at 2305 feet and is drilling below 2396 feet. It is an east offset to the same company's Horn 2, which produced 6768 barrels initially and was the largest well in the field. Payne Drilling Company's Bullock 6, NE SW NE of Section 22-6n-3e, third location north of the Twin State, Archer 4, has rig on the ground and should be drilling within a short time.

COMMITTEE RECOMMENDS NO CHANGES TO LEGISLATURE

(Continued from page 25)

(d) allowing any natural gas well to wastefully burn; (e) the wasteful utilization of natural gas; (f) the creation of unnecessary fire hazards.

"2. The provision for ratable or equitable producing has been stricken from the conservation provision of the law but left for the protection of the producer in a common purchaser act. The obligation is thus left where it ought to be—with the purchaser who makes markets and not with the producer who seeks them.

"3. Should all price fixing be stricken from our regulation of the petroleum industry and our law made uniform with other producing states and foreign countries, particularly the state of Texas, the result would not be chaos, or a return to the 'law of the jungle,' or anything other than uniformity of law in the hope of recapturing the markets that have been lost and restoring stability.

"4. The administration of state petroleum policy should be drawn for the welfare of our 2,500,000 people rather than the some thousand oil producers of the state and some few large concerns that have gigantic interests outside the state.

"5. There is no certainty that the repeal of proration would result in the impairment of the general price structure in the state. It is suggested that if any great additional amount be sold from such flush fields as Oklahoma City at reduced prices, such oil very probably would go to storage with the added cost thereto that does not obtain in the settled pools. The cost of storage might very well be the equalizing factor that would tend to maintain the present price structure. In this connection it is pointed out there is an empty steel storage in the state of Oklahoma of about 25,000,000 barrels. This result actually obtained in the flush Cushing field in 1915, the year of the enactment of the present law. Large quantities of Cushing oil during that period went into storage at very reduced prices without impairing the general price structure in settled fields. The posted market price for Oklahoma and Kansas crude steadily increased during the year 1915 from a price of 40 cents in February, 1915, to $1.20 per barrel, reached December 14 of the same year.

"6. It is inadvisable at this time to recommend any legislation tending to exclude from doing business in the state foreign concerns.

"7. If the recommendations made in the report to be in principle adopted it is believed the state will move back toward constitutional government in its relation to the petroleum industry. The laws of supply and demand will be restored and not stand repeal as they do today. The law and administration of our business made more uniform with the regulation in other producing states in force, such as Texas. The revenues of the state will be increased and made steady and values in anywise affected by the industry made more sound and rendered more stable."

This majority report was signed by C. A. Owens, chairman of the committee; C. C. Champlin, president of Champlin Refining Company, Enid; Pat Malloy, special counsel of Sinclair Oil & Gas Company, Tulsa; W. R. Ramsey, president of Ramsey Petroleum Company, Oklahoma City, and E. B. Howard, president of Oklahoma Oil Producers Association.

A minority report is yet to be filed. Wirt Franklin, president of Wirt Franklin Petroleum Corporation, Oklahoma City; E. B. Reeser, president of the American Petroleum Institute, Tulsa; William N. Davis, president of Mid-Continent Oil & Gas Association, Bartlesville, and Roy Johnson, independent producer of Ardmore, compose the minority.

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New Mexico and Rocky Mountain Area

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Utah Legislature Considers State Board of Geology

Salt Lake City, Utah.—The Utah section of the American Institute of Mining & Metallurgical Engineers has sponsored a bill introduced jointly in both houses of the Utah state legislature, asking for the formation of a state board of geology similar to that now functioning in Colorado. Bill requires that such a board have for its duties the collection and distribution of reliable information regarding the mineral resources of the state, the study of the geological formations of the state, the investigation of the kind, amount, and availability of various mineral substances contained in state lands, the consideration of such other scientific and economic problems as should come within the field of the survey, the cooperation with Utah state bureaus dealing with related subjects with the United States Geological Survey and the United States Bureau of Mines; and the preparations, publication, and distribution of reports and bulletins embodying the results of the work of the survey.

Plan Gas Line from Muskrat and Sand Draw to Nebraska

Cheyenne, Wyoming. — A certificate of convenience has been granted North Central Gas Company (New York Oil Company) to lay a gas pipe line from its Muskrat and Sand Draw field sources in central Wyoming, to eastern Wyoming towns and communities. The line as planned would also furnish some western Nebraska towns with fuel. Work on the new line is to be started by March 1 of this year; the line will be some 411 miles long and will supply Douglas, Orin Junction, Glendo, Wheatland, Laramie, Lingle, Guernsey and Torrington. A branch line will supply Laramie, in southeastern Wyoming. In western Nebraska the company would serve Alliance and Scottsbluff. Among others who applied for certificates were Public Service Corporation of Nebraska, the C. E. Bivens interests of Denver, and Frank England, a Casper lawyer representing unnamed principals. The first-named would bring gas from the Amarillo, Texas, fields, the second from the Baggs, Wyoming, structure, and the third from a structure east of Douglas now in the process of being developed.

Greasewood Dome Discovery Well Increases Production

Denver, Colo.—The discovery well on the Greasewood dome structure, in Weld County, is reported by Platte Valley Petroleum Company to have increased its production recently from the average 350 barrels per day to 440 barrels per day. Well's initial flush production was 565 barrels. The company has announced plans for five more wells to be drilled on its holdings this spring; one test will be a north offset to the discovery. The discovery has produced 30,000 barrels of high grade crude oil up to February 1, since it was drilled in on October 10, 1930. Horizon from which the crude is being produced is not definitely identified, and operators interested in holdings in the territory hope that Platte Valley Petroleum Company will drill the test deeper so as actually to determine the producing sand.

Shelby, Mont.—Considerable speculation and unrest has been caused among operators in the Kevin-Sunburst field since Ohio Oil Company has stopped taking any crude from that district. Ohio Oil Company recently posted a lower field price, $1.25, for the crude, but inasmuch as it is buying none it has not had much effect on the many producers who have contracts with the company. However, International refinery (The Texas Corporation and others) at Sunburst has offered to make two-year contracts this month with producers from whom they are buying at the now posted $1.25-per-barrel figure. Other independent refineries have been reconditioned in the territory and are taking their capacity of Kevin-Sunburst oil for distribution to independent marketing agencies.

Park County, Colorado, Test Producing Uninflammable Gas

Denver, Colo.—South Park Oil Company's wildcat well on the South Park structure, in Park County, Colorado, is showing considerable non-inflammable gas at a total depth of 1810 feet, according to reliable report. This well is reputed to be the highest drilling test in the United States, elevation at the location being 9600 feet. It has previously not attracted any particular attention, but now that non-inflammable gas is showing, comparisons are being made with Continental Oil Company's carbon dioxide wells on the North Park structure. Formation shutoff will be made before the production can be tested, as the hole is reported to be caving badly.

Riverton, Wyo.—A heavy pressure of gas has again developed in the deep test being drilled in the Sand Draw field in Fremont County. The hole at last report was bottomed in the Dakota series, while crew was reaming and taking cores. Total depth is 5360 feet. Cores are reported to be showing a very heavy gas pressure which is being controlled by mud and heavy fluids. The well is being drilled by Producers & Refiners Corporation, and is the first test ever successfully to penetrate the "big gas" sands in the district which furnishes a large part of New York Oil Company's supply for its gas lines in central Wyoming.

Casper, Wyo.—The deep test well being drilled on the Geary Dome structure, 12 miles east of Casper, is now drilling in the top of the second Wall Creek sand, making slow progress because of the continued core-taking. Last reported total depth is 5309 feet. This well is being drilled by Midwest Refining Company and its affiliated companies.

North and West Texas Field Notes

H. H. KING, *Staff Representative, Fort Worth, Texas*

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Sunray Plans Dumas Field, Moore County Line Outlet

Amarillo, Texas.—Construction of a six-inch line to connect the Dumas field, located in northern Moore County, to a tank car rack on the Rock Island Railroad at Altman has been authorized by Sunray Oil Company. This company plans to give a production test of its properties in the field before proceeding with its projected 5000-barrel refinery at Altman, which is located about four miles north of the main part of the field. Bartex Pipe Line Company is connected to the field with a six-inch line, but has not accepted oil since November 1, 1930, when the Philtex Oil Company, also a subsidiary of Phillips Petroleum Company, ceased all crude buying in Panhandle district.

Sunray Oil Company has three completed wells that registered a combined potential gauge of 2705 barrels daily on latest proration compilations, including 300 barrels from the discovery well of the Dumas field. The latter was recently purchased from A. D. Morton et al along with about 1240 acres of proven and semi-proven leases. Two completed oil wells held by Shamrock Oil & Gas Company and one each by Delmar Oil Company and Home Gas Company account for an additional 600 barrels daily production in the field.

Production in the Panhandle advanced to 56,200 barrels daily average during the past week, although proration rules call for a maximum of only 40,000 barrels daily. Gray County is the principal offender in exceeding the fixed quota, and during the past week averaged 43,160 barrels daily. A test case on the rights of the Texas Railroad Commission to enforce proration in the Panhandle is now being thrashed out in District Court at Austin with Danciger Oil & Refining Company as defendant. The latter has been operating under the protection of a temporary injunction, and Sunray Oil Company is also relieved by a temporary injunction. Indications are that the defendant will appeal the verdict if an unfavorable one is rendered.

Deeper drilling on Mazda Oil Corporation (Julius Livingston), Combs-Worley 1, an outpost test in the northeast part of the Finley-Brown field, Gray County, boosted the production to 2470 barrels oil and 9,000,000 cubic feet of gas daily. This well is producing from granite wash formation at 2924-42 feet, with a total depth of 2958 feet. It is located in the SWc NE Section 35, Block 3, I.&G.N. Survey, and Shell Petroleum Corporation farmed out the lease, retaining an over-riding royalty. Bell Oil & Gas Company has connected to the well to buy the oil. Completion of the well was delayed since middle January because of lack of pipe line connection.

Act Introduced to Change Sale of Oil and Gas Leases

Austin, Texas.—An act has been introduced in the house of representatives to amend Acts 5353, 5354 and 5364, division 2, chapter 4, revised civil statutes of 1925, relative to the sale of oil and gas leases on coastal areas and unsurveyed school land so as to include surveyed school land, to fix a minimum price for leases, to provide for the payments of annual rentals and the disposition of all payments; and declaring an emergency.

Section 1 is to be revised as follows: The commissioner shall fix the minimum price to be paid, and the day and hour when an area or areas will be subject to lease and advertise or re-advertise such areas at least 30 days before such lease date, except as provided in case of tie bids. The commissioner may give such notice by distributing printed lists as provided for sales of surface rights of public lands.

Section 3, that article 5358 of division 2, chapter 4, be amended to read as follows: Terms of lease—The areas included herein shall be leased for one-eighth of the gross production of oil, or the value of same, that may be produced and saved, and one-eighth of the gross production of gas or the value of same, that may be produced and sold off of the area, and 10 cents per acre in advance for the first year, and thereafter, in advance, an additional sum of 25 cents an acre per year for each year until production is secured. When production has been secured in commercial quantities and the payment of royalty begins and continues to be paid, the owner shall be exempt from further annual payments on the acreage. If production should cease and royalty not paid, the owner of the lease shall, at the end of the lease year in which royalty ceased to be paid, and annually thereafter, in advance, pay 25 cents per acre so long as such owner may desire to maintain the rights acquired under the lease, not to exceed 10 years from the date of said lease.

Section 4, that article 5364 be amended to read as follows: The commissioner of the land office shall remit all payments received under this act to the state treasurer to be credited to the permanent school fund.

Section 5, that all laws or parts of laws in conflict herewith are hereby repealed.

Section 6, that the importance of this legislation creates an emergency and an imperative public necessity, and that the constitutional rule requiring all bills to be read on three several days be suspended, and said rule is hereby suspended and this act shall take effect and be in full force from and after its passage, and it is so enacted.

Leovy Heads A. P. I. Committee to Combat Anti-Pipe Line Move

F. A. Leovy, Gulf Oil Company, Pittsburgh, has been appointed chairman of an American Petroleum Institute committee of oil company executives which will direct the active opposition of the petroleum industry against railroad proposals to divorce pipe lines from oil company ownership. Members of the committee are:

Henry M. Dawes, president, Pure Oil Company, Chicago; Henry L. Doherty, president, H. L. Doherty & Company, New York; R. C. Holmes, president, The Texas Company, New York; D. J. Moran, president, Continental Oil Company, Ponca City, Oklahoma; J. Howard Pew, president, Sun Oil Company, Philadelphia; Frank Phillips, president, Phillips Petroleum Company, Bartlesville, Oklahoma; E. B. Reeser, president, Barnsdall Corporation, Tulsa; E. G. Seubert, president, Standard Oil Company (Indiana), Chicago; W. G. Skelly, president, Skelly Oil Company, Tulsa; L. P. St. Clair, president, Union Oil Company, Los Angeles, and W. C. Teagle, president, Standard Oil Company of New Jersey, New York.

East Central Texas Field Notes

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Rusk County Production Now 11,500 Barrels Daily

Tyler, Texas.—Rusk County started the current week off with an actual production of about 11,500 barrels daily from nine flowing wells and one pumper, and the majority of these were pinched because of limited market outlet. During the same period there were five "dead" producers in the county, and one big producer was shut in pending completion of pipe line connections.

Release of gas pressure on the west side of the Joiner field following recent completions has had a telling effect on the comparatively small producers on the east side near the discovery well, which has been dead for more than a week. Owners of wells that fail to flow are slow in installing pumping equipment, as the return from crude sales at prevailing prices offers little profit from pumping wells, except when fuel oil contracts can be had with drilling outfits at 75 cents per barrel. The supply of natural gas in the county is not sufficient to operate but a small percentage of the boilers now fired up, and it is quite probable that outside gas must be drawn upon as the demand increases, as comparatively little gas is found with the oil.

Preliminary production data on the Joiner field forecasts a comparatively short flowing life for wells closely drilled, and the most consistent producers are those that are flowed through tubing and chokes. The value of tubing and chokes to these wells was illustrated middle last week when Frank Foster-Jeffries and Charles Kolp's Mayfield Alford 1 went dead after gauging 158 barrels oil per hour for two hours, flowing through 6⅝-inch casing and a single four-inch lead line. This well was completed January 31 from sand at 3602-17 feet, with a total depth of 3630 feet, but was not equipped with liner or tubing, according to reports. It is credited with having flowed 250 barrels per hour on brief tests a few days after completion, and was not kept on steady production because of delay in completion of pipe line system being built by the well owners and associates.

Nearly 20 hours of swabbing was required to start natural flow of Bert Shaw Oil Company and Imperator Oil Corporation's Ashby (2½-acre site) 1, after sand was passed through at 3609-35 feet, with shale at 3635-38 feet. This well gauged 1295 barrels oil during first 19 hours, then made 1040 barrels the following 24 hours through 2½-inch tubing. The oil is being sold on contract to Petroleum Marketing Corporation at 35 cents per barrel net to the producer. W. B. Hamilton-Jenkins Brothers-Saner and Consolidated Oil Company's Camp 1 was completed February 5 making 981 barrels oil first nine hours from sand at 3614-40 feet, with the hole bottomed in shale at 3643 feet. Each of the above have a one-fourth interest in the property, with W. B. Hamilton operating same. Deep Rock Oil Company et al's Mayfield Alford 1 was pinched to 2286 barrels daily at the close of the week, and during the day previous flowed 3745 barrels 40 gravity oil through 2½-inch tubing, with only 70 pounds casing pressure and 25 pounds tubing pressure.

Contending Forces Clash in Rusk-Gregg Proration Row

Longview, Texas.—Repeated clashes between opposing forces and those sponsoring proration enforcement in the prolific oil fields centering on Rusk and Gregg Counties resulted in a deadlock when a joint meeting of operators, lease and royalty owners and East Texas business men was held here February 5. Ranking officials of Standard Oil Company of New Jersey and Humble Oil & Refining Company, a subsidiary, personally took a hand in working out a compromise during an inspection trip over the district February 8, and arrangements have been made for the appointment of a new committee that will have representation from all concerned interests in the matter. This committee is to meet in Tyler before the end of the current month to try and perfect a suitable proration plan. In the meantime the anti-proration group, which largely consists of parties

Gregg-Rusk County Producers

	Elev.	Pecan Chalk	Austin Chalk	Producing Horizon	Total Depth	Date Comp.	Init'l Prod.	Current Prod.
GREGG COUNTY—								
Arkansas Fuel Oil Co. F. K. Lathrop 1	401	2458-2870	3528-3554	3569-3587	3587	1-26-31	10,000	490*
RUSK COUNTY—								
Akin-Rayzor-Dearing's Claude Ashby 1	447	2610-2991	3447	3614	3617		Testing	
Geo. S. Anderson et al's W. H. Frederick 1	466	2507-3015	3433	3564	3570		Testing	
W. D. "Andy" Anderson et al's D. Bradford 1	396	2500	3350	3526-3536	3606	12-20-30	75	Dead
Deep Rock Oil Co.'s Mayfield Alford 1	421	2600-2980	3452-3560	3613-3632	3633	1-31-31	3,750	2290*
Federated Oil Co.'s Mayfield-Alford 1	418	2615-3008	3498-3536	3595	3607		Testing	
Foster-Deep Rock et al's Claude Ashby 1	429	2604-3014	3450	3597-3616	3616	12-13-30	4,200	1380*
Foster-Jeffries-Kolp's Mayfield Alford 1	419	2598-3004	3429-3529	3602-3617	3630	1-31-31	4,500	Dead
W. B. Hamilton-Consolidated-Jenkins' W. W. Camp 1	442	2593-3030	3453-3543	3614-3640	3643	2-5-31	3,000	970*
Haynes Drilling Co.'s J. T. Brown 1	486	2740-3075	3556-3606	3660-3673	3673	1-31-31	4,000	1525*
Humble O&R Co (was Bateman et al's) L. D. Crim 1	403	2608-3014	3480-3552	3640-3652	3652	12-28-30	15,000	500*
H. L. Hunt et al's Claude Ashby 1	391	2545-3117	3412	3518-3572	3572	1-22-31	500	320
Claude Ashby 2	416	2600-3063	3440-3527	3588-3606	3621		Testing	
Daisy Bradford 1	391	2500-2955	3372	3542-3586	3650	12-15-30	60	Dead
C. M. Joiner (E. R. Tennant, Rec.) Daisy Bradford 3	395	2403-2955	3371	3536-3592	3592	10-3-30	400	Dead
Ed. M. Jones-Houston Oil Co.'s W. R. Crim 1	440	2631-3060	3540-3601	3675	3682		Testing	
Laster Oil Co.'s Daisy Bradford 1	387	2545-2964	3390	3525-3540	3575		Testing	
Lide-Taylor Oil Co.'s Calvin Young 1	475	2714-3086	3524-3603	3677-3688	3688	2-1-31	3,500	Shutin
Tex. Lloyd et al's W. W. Camp 1	408			3541-3584	3610	1-8-31	1,200	680
Robert Oil Corp. et al's Claude Ashby 1	417	2600-3035	3455	3598-3627	3634	2-1-31	3,000	2030
Rusco Oil Co.'s Daisy Bradford 1	397	2520-2945	3354-3465	3530-3540	3626	1-26-31	15	Dead
Bert J. Shaw Oil Co. & Andrade's Claude Ashby 1	434	2672-3047	3464-3514	3609-3635	3638	2-5-31	2,000	1640
Stroube & Stroube's W. H. Frederick 1	415	2488-2958	3384-3513	3538	3618	12-2-30	110	95

(*)Indicates production pinched.

that are only indirectly engaged or interested in the production of oil, continues to play for time so as to enable field activity to become too cumbersome to respond to restriction of drilling and production.

Walter Teagle, president, Standard Oil Company of New Jersey, W. S. Farish, president, Humble Oil & Refining Company, and other officials of the two companies held conferences with anti-proration leaders during their visit in East Texas. Carl Estes, Tyler newspaper editor, who has bitterly attacked proration proposals for the district and during the preceding week spoke at the principal towns and communities in the district along with other opponents to arouse public sentiment, is the leader of the opposition.

This proration committee of 20 is to include five representatives of independent operators; five representatives of major companies; five from the ranks of oil purchasers in the district; and five representatives of royalty and land owners. The method of selecting the personnel for these four groups is optional for each to appoint their respective representatives.

The proration meeting at Longview accomplished nothing, although the two factions separately voted to petition the Texas Railroad Commission to act according to their views. However, another organization was given birth that is to be known as the East Texas Lease, Royalty and Producers' Association. The officers are: Judge C. L. Branchfield, Henderson, president; W. B. Hamilton, Wichita Falls, producer, vice-president; and Carl Estes, secretary-treasurer.

Negotiations for Sale of Gregg County Well Pending

Longview, Texas.—Negotiations were still pending early this week that involve the sale of a full interest in about 2500 acres of checkerboard leases and an undivided half interest in the Gregg County discovery well and 96-acre site by Farrell-Moncrief et al to Arkansas Fuel Oil Company for a total consideration of $3,500,000. Arkansas Fuel Oil Company already owns a like amount of acreage and half interest in the well, and desires to obtain the extra holdings to lessen the necessity of an excessive drilling campaign on the block. Although the two groups are reported to have reached an agreement on valuation of the properties, a hitch has developed on the payment. The deal as tentatively approved involves the payment of $500,000 cash at time of sale; $500,000 cash in six months; and $500,000 cash at end of the first year, with $2,000,000 additional payable from one-fourth of the oil produced.

Accurate gauge of the flowing capacity of the discovery well on the F. K. Lathrop farm, Wm. Robinson Survey, will likely be partially determined late this week, as Arkansas Fuel Oil Company has completed construction work on a three-mile, six-inch pipe line to a 50-car capacity tank car rack near Willow Springs. Plans are to produce between 5000 and 10,000 barrels oil daily for consignment to refineries near Shreveport of Louisiana Oil Refining Corporation, which is also a Henry L. Doherty unit.

Humble Puts Kilgore Well Back on Steady Production

Tyler, Texas.—Restoration of the discovery oil well of the Kilgore field, located in northwestern Rusk County, to steady production was made on the afternoon of February 5, and during the following 14 hours it flowed 562 barrels of high gravity oil through 22/64 inch choke, with 450 pounds casing pressure and 210 pounds tubing pressure. Humble Oil & Refining Company bought this well without a production test, and killed the production to set 5 3/16 inch line on bottom and 2½ inch tubing at 3570 feet before flowing into tanks. Ed. W. Bateman et al brought in the well December 28 rated at 900 barrels hourly from Woodbine sand at 3640-52feet, based on 40-minute gauge, then shut in to sell out. Production will remain pinched until the completion of Humble Pipe Line Company's eight-inch trunk line into the field in about 10 days, then it is expected that the new owners will determine the open-flow capacity.

Growing popularity of the Kilgore area with various companies and operators is evidenced by the fact that there were 11 drilling tests within a three-mile radius of the lone producer early this week, and derricks and rigs were being installed on a like number of additional locations, while a half dozen officially made locations swells the total to more than 25 operations. Humble Oil & Refining Company may be forced into drilling between 75 and 100 tests on its acreage purchased at Kilgore, thus exceeding in expenditure the initial cost of the well and block, which netted $1,500,000 cash and $600,000 payable out of oil for Bateman and associates.

Ed. M. Jones and Houston Oil Company's Crim 1, located on 10-acre lease against the south end of the discovery block, was preparing to complete early this week after having cemented 6⅝-inch pipe on top of Woodbine sand at 3675 feet. A comparison of the key formations encountered by this test with the discovery well is offered in the accompanying table. Federated Oil Company, John W. Olvey & Sample, Karona Oil Company, McDonald Brothers et al and Henry Smith et al will follow shortly afterward with one completion each. Houston Oil Company will take care of the production of the latter's lease, and also of its joint interest property held with Ed. M. Jones.

Rusk County Operations

Extent of field operations underway in Rusk County is illustrated by the following table that lists each operator and status of operations:

Operator—	Lcns.	Derricks and Rigs	Active Tests	T'l
Akin-Rayzor-Dearing	..	..	1	1
Geo. Anderson et al	..	1	1	2
W. D. "Andy" Anderson et al	..	1	..	1
Babcock Bros.-Gordon	1	1	..	2
Ball & Malone	..	..	1	1
Barbare (Universal OG&M Co.)	..	..	1	1
G. W. Basom et al	1	..	..	1
Harry W. Bleam et al	1	..	..	1
Burgoyne Bros. et al	..	..	1	1
Burton Drlg. Co. (Sabine Synd.)	..	1	1	2
Capps-Smith et al	..	..	1	1
Roy I. Carter et al	..	..	1	1
E. L. Chapman et al	..	1	..	1
Cordova Oil Corp. et al	..	..	1	1
Cranfill-Reynolds Co.	..	1	..	1
Crabtree-Rowe-Johnson	..	..	1	1
Geo. DeMontrand et al	1	..	..	1
W. H. Dunning & C. P. Link	1	..	..	1
Elliott-Johnson-Ward Oil Corp.	..	1	..	1
Elzey Drilling Co.	..	..	1	1
Geo. Fagg et al	..	1	..	1
Federated Oil Co.	..	..	2	2
Frank Foster-Wainright	..	..	1	1
Foster-Deep Rock et al	1	1	..	2
Gibson-Johnson et al	1	..	..	1
Haynes Drilling Co.	..	..	1	1
Humble O&R Co.	1	6	1	8
H. L. Hunt et al	..	1	4	5
Hill & Jack Younger	..	1	..	1
Joe Humphries et al	1	..	..	1
C. M. Joiner et al	..	1	1	2
Ed. M. Jones-Houston Oil Co.	..	1	1	2
Karona Oil Co. (Heard)	..	1	..	1
Laster Oil Co.	..	..	1	1
Laster-Miller et al	..	1	..	1
Latex Oil Co.	..	1	..	1
Luling O&G Co.	..	..	1	1
Lloyd Oil Corp. et al	..	..	1	1
Magnolia Pet. Co.	1	1	..	2
McDonald Bros. et al	..	..	1	1
H. S. Moss & Urschel	..	..	1	1
Olsan Bros. et al	..	1	..	1
John W. Olvey & Sample	..	..	1	1
Pearl Oil Co.	..	..	1	1
Pilot Oil Co.	..	..	1	1
Nat Sadler et al	..	..	1	1
Shell Pet. Corp.	1	..	..	1
Sinclair O&G Co.	..	2	..	2
Rusco Oil Co.	..	..	1	1
Rusk County Oil Co.	..	..	1	1
Henry Smith et al	..	..	1	1
Tidal Oil Co.	..	..	1	1
Warner-Quinlan Co.	..	..	1	1
Total	10	27	36	73

GREGG COUNTY OPERATIONS

Bell-Graddy et al	..	1	..	1
W. L. Brandon-McCamey	..	..	1	1
D. H. Byrd-Gulf et al	..	1	1	2
E. E. Eslick et al	..	2	..	2
Frank Foster et al	..	1	..	1
Mamie-Hammond-Clark et al	..	..	1	1
Roeser-Pendleton, Inc.	..	1	..	1
C. Rosenfield et al	..	1	..	1
Total	..	7	3	10

ECONOMY... plus!

L. H. WENTZ
OIL DIVISION
PONCA CITY, OKLA

July 22nd, 1930

Franklyn Valveless Engine Company,
Franklyn,
Pa.

Gentlemen:

For your information [illegible] Gas Pumping Engines we have had in use since 1921, 3 Type X 40 Hp. Gas Engines on Band Wheel Towers. Two of these Engines have been running twenty four hours a day.

Over this period of nine years the above Engines have been giving excellent service with practically no repairs or shut down time.

We recently purchased 8 new 40 Hp. Type [illegible] Engines, which are operating on beam wells twenty four hours daily.

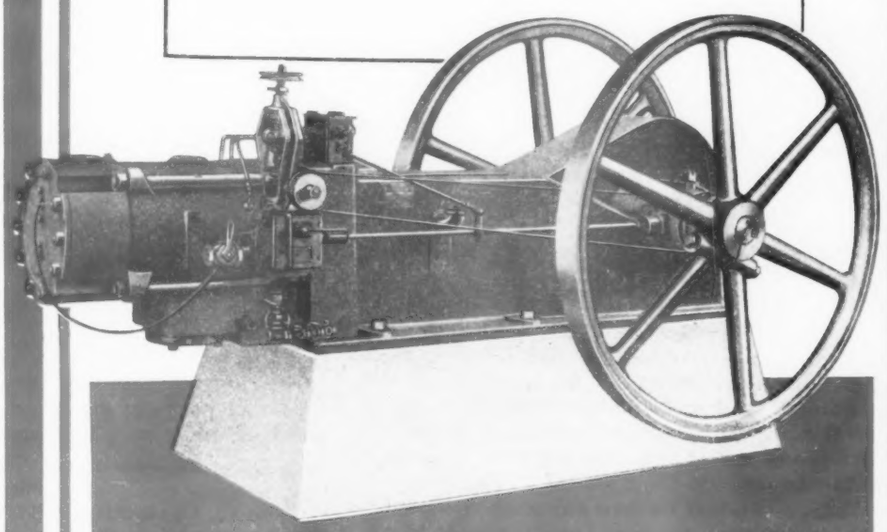
To date the Type [illegible] Engines have been giving satisfactory service.

Yours very truly,

L.H. WENTZ, Oil Div.,

By: Chas Cribbs
Superintendent

cabicc



FRANKLIN VALVELESS O.G. PUMPING ENGINE

FRANKLIN VALVELESS ENGINE CO.
Franklin, Pennsylvania

***Distributed by* OIL WELL SUPPLY COMPANY**

MARKET SECTION

(*Continued from page 40*)

pipe line facilities, and only a few wells have not been provided for. More than 300 wells were without connections in December.

Van field received a portion of its delayed request for a production increase February 1, and advanced from 27,500 to 30,000 barrels daily, while provisions have been made to add another 5,000 barrels to the allowance beginning March 1. The two concerns absorbing this production have insisted on an allowance of 50,000 barrels daily by the middle of 1931, but may alter their plans should the Rusk-Gregg County district force a price reduction on Van crude.

As a result of the public hearing held January 22, 1931, in Austin, the Texas Railroad Commission has issued an order dated February 6, 1931, announcing further rules governing the takings to be made from the Van field, by which the field's allowable is increased on a graduated scale starting with 30,000 barrels in February and increasing 5000 barrels monthly until a 50,000-barrel mark is reached in May, after which the allowable will continue at that rate until further orders.

The order requires that purchasers file their nominations for purchases with the commission for the present proration period, and the production of the field is limited to that amount.

The entire field, and any future extensions, will be subdivided into 20-acre blocks and the marketable oil alloted equally among them. Three-hour tests will determine the potentials of the various wells, the flow coming through 2½-inch tubing with a 11/16 choke. Other gauges may be taken at the request of the operator or the umpire. The allowable shall then be divided according to the 20-acre plots, the allowable for each plot being divided among the wells on each plot or fraction thereof.

In the case of offset wells, the allowable of each well in a tract shall be allocated in such a manner as to allow offsetting wells to produce equally, thereby preventing unequal drainage from adjoining leases. No well is to be limited to less than 100 barrels per day production, if capable of producing that amount. Allowance is made for the exchange of oil and connections by the purchasing pipe line companies.

New wells are to be placed on the smallest choke through which they will flow during the balance of the proration period, and then reduced to their allowable, but no well shall be limited to less than 100 barrels.

The order states that the apparent outlet will be 30,000 barrels for February, 35,000 barrels for March, 40,000 barrels for April, 45,000 barrels for May, 50,000 barrels for June, and thereafter 50,000 barrels during the continuance of the order, and this shall be the allowable during the period of this order.

North Texas as a whole received a production allowance of 63,850 barrels effective February 1, including 5649 barrels from the New Castle shallow district, and 4791 barrels for the balance of north Young County, thus leaving 53,410 barrels daily for the balance of the district. The New Castle shallow area is credited with 124 producers that have a combined initial yield of 17,374 barrels daily. According to Umpire L. V. Hull, this area will continue on a six-barrel marginal allowance, and producers will be allowed to run 33 per cent of the excess production. The balance of north Young County and the North Texas district will continue to respect old marginal allowances, then produce 55 per cent instead of 58 per cent of the excess.

Details of Curtailment in Texas and New Mexico

	No. wells	Official daily potential production	Maximum daily production allowance	Percentage of potential production allowed	Daily average yield per well
Texas Panhandle—					
Gray County	743	99,467	26,974	27.12	36.30
Hutchinson County	926	25,899	8,147	31.46	8.80
Carson County ...	237	12,988	3,415	26.29	14.41
Moore County ...	22	3,381	1,060	31.35	48.09
Wheeler County ..	43	715	367	51.33	8.53
Potter County	1	7	2	28.57	2.00
Total	1,972	142,457	39,965	28.01	20.27
West Texas—					
Yates	400	5,508,696	89,500	1.62	223.75
Crane-Upton	598	48,189	18,484	38.36	30.91
Howard-Glasscock Dist.					
3000-foot wells..	92	15,491	6,648	42.92	72.26
2500-foot wells..	53	9,654	3,864	40.92	72.91
2200-foot wells..	85	45,608	12,026	26.37	141.48
1800-1300-ft. wells	300	8,108	4,076	50.27	13.55
Total	530	78,861	26,614	33.75	50.22
Ector County	78	25,410	6,384	25.12	81.81
Winkler County ..	534	113,615	60,000	52.81	112.36
Total	2,140	5,774,771	200,982	3.48	93.92
North Texas—					
N. Texas (Misc.)	13,673	71,140	53,410	75.08	3.91
New Castle	124	17,374	5,649	32.51	45.55
North Young (Miscellaneous).	700	6,475	4,791	73.99	6.84
Central East Texas—					
Van	200	*393,842	29,974	7.61	149.87
Southwest Texas—					
Darst Creek	251	160,262	30,000	18.72	119.52
Salt Flat	333	19,153	15,333	80.00	46.04
Pettus Townsite ..	19	7,938	4,500	56.68	236.84
New Mexico—					
Hobbs	141	1,116,820	31,353	2.81	222.36
Central West Texas—					
All fields	9,020	.....	25,000	....	2.77

* Potential through 11/16-inch choke.

Note—North Texas district subdivided into three parts and revised potentials made in January, 1931.

Although the greater portion of Central West Texas was not included in the crude price cut initiated by Humble Oil & Refining Company and followed by others on January 14, this district is held to a maximum production of 25,000 barrels daily from 9,020 wells or an average yield of 2.77 barrels daily per well. Central West Texas operators receive no concession for large producers, and all wells are restricted to their marginal quota, which is determined by the depths of same. Wells producing above the 2000-foot horizon are limited to four barrels, while those between 2000 and 3300-foot levels receive a maximum outlet of eight barrels, and deep wells are limited to 14 barrels daily.

South Texas Field Developments

EARL POST, *Staff Correspondent, San Antonio, Texas*

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Refugio Field Production Increase Appears Likely

San Antonio, Texas.—An average production of at least 50,000 barrels daily is in prospect for Refugio field, Refugio County, within the next two months, judging from the number of tests being started and producers completed in this area. Dozens of tests are nearing the deep horizon or are in the process of completion at this time.

The field's output already has passed the 34,000-barrel a day mark from about 180 producers. While only one-third of the producers are in the deep formations, more than 50 per cent of the production is from these levels. The average for the deep sands is about 340 barrels of high gravity oil daily, while the wells at the 3600-3700-foot level produce only an average of 138 barrels of low gravity oil daily. The prolificness of the deep, high gravity sand is an incentive for the tremendous amount of drilling at this time.

Operators are assured consistent producers in the deeper levels. An instance of this is in Mission Drilling Company of Texas' Moss Powers 1, Refugio town block 110, which came in May 19, 1930, for an initial production of 257 barrels of pipe line oil at 6458-95 feet. This well at last reports was making 178 barrels of high gravity crude and showing no water. This well is given the credit for proving the deepest horizon in the field. Union Producing Company brought in Rose Lambert 1-A on April 1, 1930, for an initial production of 600 barrels of 42 gravity oil on a 3/16-inch choke, opening this deep horizon, but in working on the well, salt water broke in and practically ruined the test. It had the sand at 6468-75 feet.

The section of the field to the east of the townsite is receiving major part of the play at this time in as much as it is proving the most prolific. Wells have been completed for initial flows of from 1000 to 1500 barrels daily on small chokes.

United Production Company's O'Brien lease is at this time one of the most active spots with this company carrying on a most extensive plan of development. The O'Brien 5 was completed last week for an initial output of 600 barrels on a one-fourth-inch choke at 6459 feet. It has 1000 pounds pressure on the casing and 1100 pounds pressure on the tubing. The size of the choke keeps the well from showing its real worth. The same company's O'Brien 7 and 8 are due for completions within a few days. The No. 7, is rigging up to swab after drilling out plugs at 6457 feet. The No. 8 is setting casing at 6445 feet over a sand cored at 6447 to 6456 feet which showed saturation. Locations have been announced for O'Brien 9, 10 and 11 and it is reported that several more tests will be drilled on this lease immediately.

United Production Company's Fox 3 is drilling around 4870 feet; Fannie Heard 11 at 5195 feet; Powers 8, waiting on cement at 6444 feet after coring saturated sand at 6445 to 6455 feet; Shelton 3, rigging up to swab after drilling out plugs at 6446 feet; Ryalls 6, rebuilding derrick after pulling it in. This well cored a very good showing in the shallower sand, topped at 3654 feet and set casing at 3648 feet. The accident happened while the plugs were being drilled.

Dash Production Company has two tests in the field, the Refugio town block 105 test, which is waiting on cement at 6451 feet over a sand cored at 6452-59 feet, and W. Upton 1 on town block 86, which is drilling at 1535 feet.

E. M. Jones' well on Refugio townsite block 106 is reported as a 475-barrel producer at a total depth of 6457 feet, while Moody-Seagraves Producing Company's Heard 3-B is making 175 barrels at 3652-61 feet with casing set at 3648 feet. It is south of the townsite and extends the shallower pay.

Moody-Seagraves Producing Company is drilling out the plugs in Strauch 1 on town block 64. Casing is set at 6455 feet and total depth is logged at 6457 feet. O'Brien 1-B is drilling at 5882 feet. O'Conner 6 is drilling at 4967 feet.

In the wildcat and semi-wildcat territory, a number of tests are holding interest at this time. Houston Oil Company's Rooke 1-B, two miles southwest of Refugio and one-half mile west of production is shut down after swabbing only a few barrels of oil. After being allowed to set several days, no increase was apparent. It has the sand at 6186-94 feet. The same company's Rooke 14, in the old gas area, three miles west of the main Refugio production, is still shut down at 3748 feet after testing salt water. It is an offset to the Smith-Rogers semi-wildcat producer. Moody-Seagraves Producing Company's Heyser 1-B on the company's tank farm site, one mile southeast of any production, looks promising after coring a saturated sand at 6417 feet, which showed oil and gas and no water. At 6384 feet, the well showed a sand that was saturated with water, oil and gas. At 6410 feet, a similar sand was cored. It is now likely that the well is in the regular producing horizon of the field. It is being cored further. Also south of Refugio, this company is drilling E. St. Johns 1-B at 4616 feet.

Zapata County Has Two Small Completions During Past Week

San Antonio, Texas.—Two small producers and four locations were recorded in Zapata County during the past week. The producers were J. I. Newton's I. G. Trevino 2, Block 7, Survey 6, which logged the sand at 1261-75 feet, and S. R. & C. Oil Company's Trevino 12-A, Block 2, Survey 66, which is in the pay at 1252-86 feet. Each well is pumping 35 barrels daily. They are in the Muckelroy extension pool.

The new operations were as follows: W. R. Shankle's Garza 1, Block 10, subdivision of Zorro ranch in Comitas grant, location; Shankle and Murray's F. Cuellar 1, Block 6, Survey 61, location; S. R. & C. Oil Company's Trevino 13-A, Block 2, Survey 66, drilling at 800 feet; Lowe and Rogers' P. Benavides 1, Block 5, Survey 11, rigging up. The first three wells are located in the Muckelroy extension pool, while the latter is in the Andrews pool.

Abercrombie and Harrison have announced their purchase of Rycade Oil Corporation's 631-acre tract in Share 5, Loa Animas grant, Albercas pool. There are two gas wells and 10 oil wells on the property. The consideration in the deal was not announced.

Darst Creek Inside Well Good for 1100 Barrels

San Antonio.—Humble Oil & Refining Company's L. G. Denman 21-A, located on an inside location at Darst Creek, Guadalupe County, is a 1100-barrel pumping producer at 2590 feet, with casing set at 2561 feet. The same company is moving onto the Denman 22-A location, 300 feet due east of Denman 20-A.

Deepening efforts on Magnolia Petroleum Company's M. E. Roamel 1, erstwhile largest producer ever completed in South Texas, have been retarded by twisting off drill stem at 2405 feet, and the crew is now trying to sidetrack at 2385 feet. The Roamell well was completed March 28, 1930, as a 41,760-barrel gusher in a crevice in the Austin Chalk at 2321 feet, but was practically depleted by the close of December, and owners decided to deepen it to the Edwards lime horizon from which principal Darst Creek production is coming. Magnolia Petroleum Company's M. T. Klein 7 is drilling at 905 feet.

Sun Oil Company's Knoblock 13 has set casing at 2550 feet and is waiting on cement to harden. That company has made a new location on its Dowdy lease in the south end of the field.

Drilling Progress is Slow In Real and Kerr Counties

San Antonio, Texas.—Slow progress is being made in the tests being drilled in the new district recently opened in Real and Kerr Counties, 45 miles west of Kerrville.

Evans and Gant's Seiker and Mears 1, Kerr County, is drilling about 425 feet. The same operators' Estle Young 1, also in Kerr County, will spud as soon as the water well is completed.

In Real County, Gant and Kilgore's Dan Auld 1 is preparing to spud. Evans and Sprinkle are drilling at 1012 feet in their Haby 1, while their Marcus Auld is setting 10-inch casing at 1250 feet.

The wells are within a radius of seven miles of the discovery test, Evans and Gant's Jeff Love 1, which has been placed back on pump after raising and resetting the casing and drilling out three feet of wool and lead plug in the bottom of the hole.

First Producing Horizon in Live Oak County is Defined

San Antonio, Texas.—Houston Oil Company has definitely defined the first oil producing horizon in Live Oak County with its Boothe 1-A, 3600 feet northeast of the Mt. Lucas gas field in the M. B. Kivlin Survey. On February 4, the well was flowing 27 barrels of high gravity oil in a sand at 5270-77 feet. A gas lift is being used. The well showed 67 barrels in 24 hours several days before.

While the production is very small for such a depth, it is likely that an attempt will be made to work out the structure by the drilling of additional wells.

The company's Cartwright 22, 500 feet east of the Mt. Lucas field in the same survey has been definitely abandoned. The well was drilled to a total depth of 6023 feet, plugged back to 1609 feet in at attempt to complete as a gasser and then closed down as a failure. The derrick is being torn down.

The Brown Land & Cattle Company 3 is drilling at 4770 feet in hard shale and Brown Land & Cattle Company 4 is making hole at 3822 in shale and lime. Both wells are being drilled by Houston Oil Company and are located on the M. B. Kivlin Survey.

Phillips Petroleum Company announced a new location in Live Oak County, three miles northeast of Oakville. It is 1400 feet from the west line of the survey and 1320 feet north of the Mineral-Oakville highway on Refugio school lands.

Ray-McKinney Pool Extension Well Shows Further Increase

San Antonio, Texas.—United Production Corporation's Ray 26, which extended the Ray-McKinney discovery pool of the Pettus field, Bee County, 1000 feet to the east recently, is reported to be flowing at a rate of 282 barrels daily. The well came in January 15 as a gasser at 3941-51 feet and on January 19 began spraying considerable oil. It has been increasing constantly since that time.

A location was announced for United Production Corporation's Ray 34, 900 feet due east of the Ray 26 in the Thomas Hanson Survey. This well will be drilled immediately. Its successful completion will further extend this field to the east.

The only other well in the immediate Pettus field to be active at this time is J. S. Mauldin's Fee 1, just south of the townsite, which resumed drilling after being shut down for a number of weeks. The well cored a sand at 3802 to 3808 feet which showed oil. It is being cored further before testing.

To the north of the field three miles in the extension pool recently opened by the United Petroleum Corporation's Ray 13, this company has spudded in Ray 32 and is now drilling around 365 feet.

Five miles west of the Grayburg pool in the T. B. Barton Survey, Rowan and Hope are beginning operations on Fannie Goree 1 after completing a second water well.

Duval County Extension Test Appears Promising

San Antonio, Texas.—Frasher and Schoolfield's Bishop Duval Land Company 2, southwest extension of the Schoolfield & O'Byrne field, Duval County, is setting casing after coring a sand topped at 2271 feet. The formation is regarded as high in this test and a producer is expected. The well is located in the south one-half of Section 135.

A new location has been announced in this area, the Weil Brothers 1 to be drilled by O'Byrne et al. It is 300 feet from the south and east lines of the B. S. & F. Survey No. 568, seven miles southwest of this field.

The S. R. C. pool, 10 miles to the west of the Schoolfield & O'Byrne district, is to get its fourth test. Vacuum Oil Company and S. R. & C. Company will drill Duval County Land Company 3, 300 feet northeast of discovery test, the same operator's No. 1, which is producing at 1725 feet. The Texas Company's Duval County Land Company 1, 500 feet east of the discovery well, and the Vacuum-S. R. & C. Duval County Land Company 2, 850 feet southwest of the discovery test, were abandoned as failures. The new well will be watched with much interest.

Taylor, Texas.—Wheeler et al's Lee County wildcat in Hiram Donahue Survey is reported to have had trouble with gas after setting of about 2000 feet of casing, the gas having twice blown casing seat and wall packer, which was set with a liner. The well will be recemented to cut off water, and another test is to be made.

Gulf Coast Field Developments

JACK LOGAN, *Staff Representative, Houston, Texas*

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Evangeline Field Deep Test In Acadia Parish Abandoned

Houston.—The deep test of Yount-Lee Oil Company, Houssiere-Latrielle 9, located in Section 47 of the Evangeline field of Acadia Parish, Louisiana, attracted considerable attention during the past week when the well blew out making a small amount of gas and oil. The flow soon turned to salt water, however, and the crew is fishing for drill stem which stuck when the initial blow-out took place.

The well is down to a total depth of 8666 feet, being second deepest test ever put down along the Louisiana-Texas Gulf Coast. A similar occurence took place when the well attempted to blow out from a depth of 8613 feet and the drill stem had to be fished out.

The Texas Company's Rayne Heirs 5, on the south edge of Evangeline field holds the distinction of being the deepest test ever drilled along the Gulf Coast, having been abandoned about August 1, 1930, in shale at 8730 feet.

Aside from being the scene of the two deepest wells ever drilled on the coast, Evangeline field also has the deepest commercial production, with several wells producing from below 7000 feet, including one 7450 feet deep.

Test for Sulphur at Moss Bluff Dome is Abandoned

Houston.—Texas Gulf Sulphur Company, which is testing sulphur possibilities under leases of Gulf Production Company, at Moss Bluff dome, Liberty County, has abandoned Carter 1 at 1805 feet.

This is the initial test of Texas Gulf Sulphur Company on this dome. The dome, however, was tested to some extent for sulphur in 1926 and 1927 shortly after its discovery by geophysical methods, with Union Sulphur Company operating on the Kyle lease of Sun Oil Company in James McFaddin Survey. Union Sulphur Company drilled five wells there, the first, Kyle 1, having the distinction of proving the presence of the dome by drilling into cap rock around 800 feet.

Three oil tests are under way at Moss Bluff at present, all on different flanks of the dome. Gulf Production Company's McFaddin 3 on the east flank, 600 feet north of No. 2, a deep producer, and in line with No. 1 and No. 2, is drilling shale at 4943 feet. Farther south, on the southeast flank, Humble Oil & Refining Company is drilling at 3381 feet in shale and lime in Sterling 7, which is located 300 feet south and 100 feet west of No. 6, Moss Bluff discovery well. The same company's Breeden 2 on the northwest flank of the dome is rigging up. Its location is in the B. M. Spinks Survey, 500 feet east of that of No. 1, which had a gas show at 5885-5900 feet, but which was finally abandoned as a non-productive test at 7064 feet.

Humble Oil & Refining Company recently made location for Sergent 2 on the east side of the dome. It is 500 feet south and 350 feet east of No. 1, which was completed as a producer at 5860 feet.

Oil production at Moss Bluff is still limited to a few wells on the southeast and east flanks of the dome, owned by Humble Oil & Refining Company and Gulf Production Company.

Gulf Abandons Deep Test Off West Edge of Hankamer Dome

Houston.—Gulf Production Company has abandoned Ezzell 1, deep test off the west edge of Hankamer field, Liberty County, quitting the hole at 7095 feet at which depth it was in salt water. This well originally came in as a pumping well, yielding 24 gravity oil at 3810-3832 feet, but it was later deepened. Previous to first completion it had oil showings at 2650 and 2875 feet, and after deepening from the 3800-foot sand it had showings around 4000 feet, 5400 feet, and 5800 feet, although none proved of commercial importance. Location of Ezzell 1 was on a 150-acre tract in the Levi Barrow Survey.

Gulf Production Company has leases covering a large part of promising acreage at Hankamer field, and has been the only operator there. It has completed 10 producing oil wells in the field, all on the E. W. Boyt land.

Houston.—Calcasieu Oil Company is swabbing salt water in its Valrey 9, Cameron Parish, located 2495 feet west and 745 feet south of the southeast corner of Section 13 in the East Hackberry field. The well was formerly drilled to 3137 feet but was plugged back to 2131 feet for a test of the sand at that depth after no favorable show had been found at the original depth.

Houston.—Vacuum Oil Company is building derrick for its Cameron Meadows 2, located 500 feet south of Cameron Meadows 1, the discovery well of Cameron Meadows field, Cameron Parish, Louisiana. The discovery test came in for 500,000 feet of gas at 3850 feet. It has been shut in and will be used to furnish fuel for the second test. Cameron Meadows 2 is located 1900 feet west and 3120 feet south of the northeast corner of Section 21 in Cameron Parish.

Houston.—Sun Oil Company has abandoned two of its tests in Washington County in the Clay Creek area without having encountered any favorable shows in either of the wells. Freeman 1 encountered salt at 3365 feet and drilled into it to a depth of 3638 feet and was plugged back to 1990 feet where casing was set. Tests failed to show any signs of production from that depth. Janner 4 hit top of the salt at 3865 feet and was finally abandoned at total depth of 5517 feet. Producing sand in this field is found around 1300 feet.

Houston.—Vacuum Oil Company has shut in its Waite 1, discovery well at Iowa salt dome prospect, Calcasieu Parish, Louisiana, brought in two weeks ago as a 300-barrel producer at 5001-5008 feet. Salt water intrusion prompted the shutting in of the well until further orders are received.

Houston.—Arkansas Natural Gas Company has abandoned its wildcat, Machemehl 1, Austin County, at 5005 feet. The test was located approximately 2½ miles north of Bellville.

Houston.—Humble Oil & Refining Company is drilling sand at 3631 feet in McFaddin 1, first test of a geophysical prospect in southern Jefferson County, about eight miles east of Big Hill. The location is 230 feet south and 330 feet west of the northeast cernor of the T. & N. O. Survey, Section 234.

Louisiana--Arkansas Field Notes

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Sixth Producer is Added in Urbana District, Arkansas

Shreveport.—The Urbana district of Union County, Arkansas, where deepest oil production in that state is found, added its sixth oil producer during the week ending February 7, when Marine Oil Company's W. B. Thompson B-3, SE NE Section 10-18-13, was completed flowing 165 barrels of oil daily free of water through 2½-inch tubing from four feet of sand at total depth of 3557 feet; 6⅝-inch casing had been cemented at 3551 feet. Derrick is already up for W. B. Thompson B-2, SE NE of the same section.

The Johnson County gas field of north central Arkansas added one of its largest gas producers during the week when Arkansas-Louisiana Pipe Line Company's Hudson 1, SE NE Section 14-10-24, gauged 41,300,000 cubic feet of gas with 1050 pounds rock pressure at 3164 feet, 10-inch casing was set at 2607 feet and eight-inch with bradenhead at 2875 feet.

During the week J. D. Reynolds moved in rig for Grayson 1, Section 21-15-19, Ouachita County, Stephens townsite, the new test being 900 feet southwest of his Pace 1, in the same section, which is being standardized with 1000 feet of oil in the hole and total depth of 2204 feet.

Miller County, southwest Arkansas, where there was a flurry of drilling following completion of a small producer at 2800 feet last summer, but where no subsequent production has yet been obtained, secured another test during the past week when J. D. McRae erected derrick for Smith 1, NW SE Section 28-15-26 feet. Only three of the county's nine operations are at present drilling.

Arkansas-Louisiana Pipe Line Company is moving in rig for Baird 1, SE NW Section 11-7n-20w, Pope County, Arkansas.

Smitherman and McDonald are waiting for cement to harden in Reed 1, SE NW NW Section 16-15-22, LaFayette County, where three joints of mud with a show of oil were tested through drill stem recently with four feet of sand at 1190-94 feet; 8¼-inch casing was cemented during the past week at 1176 feet. Total depth is 1194 feet.

Jackson Gas Area Marks Time During Past Week

Jackson, Mississippi.—The Jackson gas field marked time during the week ending February 7 no new gassers or locations being announced in the area. United Production Corporation's and Gulf Refining Company's School Board 1, SW SW Section 16-6-1e Hinds County (all sixteenth section land in Mississippi being school land) is ready to spud despite the launching of a suit in chancery court here by W. D. Terry to dispossess the oil companies from drilling the test. Terry claims he is the holder of a surface right lease to the west half of the southwest quarter of the section and claims that the defendant companies have failed to comply with their contract originally made to begin operations within 60 days after completion of gas well and cites the completion nearly a year ago of the discovery well of the field Mayes 1, Section 2-5-1e Hinds County. He claims he has been damaged $2000 by the making of the location.

The surface rights in question were leased in 1846 for a 99-year period and since have been transferred from time to time until Terry became holder of the surface rights of the land in question. The suit itself is small but will doubtless establish a precedent in Mississippi governing holders of surface rights to sixteenth section or school land in this state.

More than 20 miles north of the Jackson gas field Central Oil and Gas Company tested dry without a show of oil, gas or water at total depth of 1550 feet in glauconitic sand and the test is drilling ahead in Cameron 1, SE SE 11-9n-1e; 6⅝-inch casing had been cemented at around 1532 feet. The well was originally planned for a 4000-foot test. The test is in Madison County.

United Production Corporation's McIntosh 1, NE SW NE Section 5-8n-16w, Covington County, 70 miles south of here, tested 28 fourbles of salt water through drill stem in a quarter of an hour from 3271-78 feet and is shut down at 3378 feet still in the Wilcox waiting orders. Mississippi Gulf Oil and Gas Company's Pope 1, NW NE Section 35-8n-16w of the same county, had been shut down at 3000 feet in sandy shale for 10 days before the company's test showed salt water awaiting results of the latter operation.

While the crew of Gulf Refining Company's McLaurin 1, SW NE Section 30-6-2e, two miles northeast of the north edge of the Hinds County part of the Jackson gas field, is engaged in helping to rig up at the Gulf-United School Board 1, the McLaurin test is shut down at 2632 feet still in the Midway chalk which was topped at 2485 feet. Returns were twice lost and regained at 2632 feet to which level the test was deepened after testing salt water with shows of both heavy oil and gas at 2515 feet. More salt water appeared at 2528 feet. Contract depth of the test is 3000 feet.

Shreveport.—Another well which has begun to act much like Loring Oil Company's Bowman-Hicks 15, Section 2-7-12, completed recently as the largest well in Zwolle, Sabine Parish, came in during the week ending February 7, making an estimated daily yield of 2,000,000 cubic feet of dry gas which on Saturday, February 7, had begun to show a spray of oil. The new gasser is H. W. Perritt's Bowman-Hicks B-2, NW SE NE Section 2-7-12, one-fourth mile northeast of the Bowman-Hicks 15, which was completed flowing 325 barrels per hour through five-eighths-inch choke. Total depth of the new well is 2275 feet, 6⅝-inch casing having been cemented at 2253 feet. If the oil yield does not increase appreciably at present total depth the well will be deepened. Both wells are between a recently opened 1½-mile south extension of the Zwolle east field and the east field proper.

Zwolle did not get a single new location during the week and recorded three failures, all being outside tests. W. M. Coates' Sabine B-1, Section 1-7-12, was abandoned as dry at total depth of 2683 feet. Frank Melat, Incorporated, abandoned Sabine 1 and 2 in Sections 6-7-11 and 14-7-12, respectively. The former was abandoned at total depth of 2500 feet and the latter, which checked low, never encountering the Zwolle marl or chalk, was dry at total depth of 2550 feet.

Summary of Field Operations for January, 1931

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Initial Production Average High on January Completions

A new low point was reached in drilling activity during January when the number of well completions in the United States aggregated only 1156, compared with 1479 in December. As a result of this slump only 519 producing wells were completed, against 650 in December. Initial oil production, however, continued to hold up, with an average of more than 1500 barrels per well and a total new oil output of 796,860 barrels. In fact, the initial production per well in January averaged 1535 barrels, against 1506 barrels in December. The total initial from 650 producing wells in December was 979,111 barrels. Concurrent with the decreased drilling activity in January was a further decline in the daily average crude production of about 89,000 barrels a day, bringing the national daily average down to only 2,092,700 barrels.

Total crude production in January amounted to about 64,874,450 barrels, a decline under December of 2,937,100 barrels. California registered the greatest decline in total and daily average crude production during January. Total production of California in January amounted to 16,607,200 barrels, against 18,316,900 barrels in December. The daily average of that state declined during January to the extent of about 52,000 barrels. Other declines in production recorded during January were Texas, outside of Gulf Coast, 22,000 barrels a day; Oklahoma, 7000 barrels a day; North Louisiana, 2000 barrels a day.. Eastern States, 2000 barrels a day; Rocky Mountain States, 4000 barrels a day.

Oklahoma registered the largest decline in well completions during January, the total receding from 243 in December to 191. As a result, initial oil production of Oklahoma declined from about 608,000 barrels in December to 530,000 barrels in January. Well completions in the Eastern States declined during January to the extent of 160 wells, although initial oil production showed a decline of only 2000 barrels. California reported well completions for January at a total of 61, against 97 in December, and initial oil production at a total of about 31,000 barrels, against 71,000 barrels in December.

UNITED STATES PRODUCTION

State—	Daily Average January*	Daily Production December	Total Production January*
Oklahoma	452,000	459,300	14,012,500
Texas (outside Gulf Coast)	511,050	533,400	15,842,350
Gulf Coast	188,850	189,300	5,853,550
Kansas	106,350	105,550	3,297,450
North Louisiana	41,100	43,000	1,273,600
Arkansas	50,700	51,100	1,572,000
Eastern States	110,250	112,200	3,418,850
Rocky Mountains	96,650	100,500	2,996,950
California	535,750	587,450	16,607,200
Total	2,092,700	2,181,800	64,874,450

*Preliminary—subject to revision.

UNITED STATES FIELD STATISTICS

Following are the completions, showing oil wells, gas wells, failures and initial production of crude oil and gas by states for January as compiled by The Oil Weekly:

State—	Completions	Producers	Gas wells	Failures	Initial Oil	Production Gas*
Alabama	3	..	..	3	.....	....
Arkansas	15	8	3	4	120	14¾
California	61	52	..	9	30,820	....
Illinois	6	2	..	4	14	....
Indiana	14	3	2	9	147	½
Kansas	44	21	12	11	13,250	145
Kentucky	66	30	12	24	6,623	9½
Louisiana	62	24	12	26	16,758	189¼
Michigan	8	3	2	3	390	1½
Mississippi	11	..	7	4	.....	122¼
New York	6	6	..	..	16	....
New Mexico	14	9	1	4	34,608	28¾
Ohio	124	32	46	46	534	32¾
Oklahoma	191	97	23	71	529,913	150
Pennsylvania	54	34	12	8	135	14¼
Texas	416	184	42	190	163,545	877¾
West Virginia	61	14	37	10	77	22½
Total	1,156	519	211	426	796,860	1,608¾

*Millions of cubic feet.

Ohio and Kentucky Decline

Ohio and Kentucky led the decline in well completions during January, Ohio showing a decline of 76 wells and Kentucky a decline of 59. Hart County, Kentucky, contributed the bulk of the new oil production obtained during January, with a total of 6330 barrels, out of a total for all of the eastern states combined of 7936 barrels. The Central Ohio district furnished 505 barrels of new oil production, of the 534 barrels reported for the state. Huntington, Indiana, contributed 100 barrels of new oil production of the total of 147 reported for the state, while Isabella County, Michigan, furnished all of the total of 390 barrels of new oil production obtained in that state during January. Calhoun County, West Virginia, contributed 33 barrels of new oil production, out of 77 barrels reported for the state. Operations in Mississippi continued to reveal the presence of a prolific gas supply during January when seven producing wells completed yielded an initial gas volume of 122,025,000 cubic feet. This was a decline, however, under December of about 87,000,000 cubic feet. Hinds and Rankin Counties contributed the bulk of the new gas supply reported in Mississippi during January.

Oklahoma City drilling operations resulted in bringing in 492,625 barrels of new oil production out of a total for the state of 529,913 barrels. Kansas well completions declined from 79 wells in December to only 44, reducing the initial oil output from 19,000 barrels in December to 13,000 barrels in January. Of the total new production obtained in January, McPherson County wells accounted for a total of 10,705 barrels. Arkansas contributed a new production total during January of 120 barrels, while North Louisiana drilling operations yielded 8500 barrels of new oil production. Practically all of the new oil obtained during January in Arkansas and North Louisiana resulted from wildcat operations. Drilling in the Louisiana Gulf Coast area during January was somewhat accelerated by the completion of 26 wells, against 19 in December, resulting in a material gain in new oil production. New production increased from 2672 barrels in December to 8250 barrels in January. East Hackberry, Lake Barre and Lockport con-

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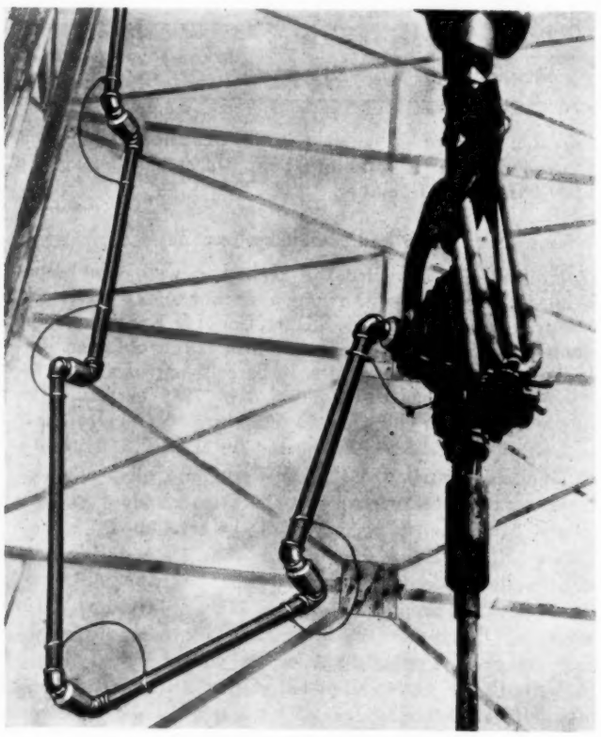

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PAST TWELVE MONTHS

The record for the past 12 months is an interesting study for comparative purposes, the following table giving the field statistics for all states:

Month—	Completions	Producers	Gas wells	Failures	Initial Prod.
January, 1930	1,918	1,142	296	480	685,325
February	1,463	881	201	381	990,869
March	1,544	794	220	530	665,535
April	1,702	1,023	180	499	776,024
May	1,973	1,125	228	611	771,977
June	1,679	950	223	506	580,997
July	2,144	1,167	306	671	845,068
August	1,837	930	310	597	1,160,055
September	1,165	619	208	338	833,109
October	1,199	587	245	367	615,002
November	1,253	644	217	392	901,046
December	1,479	650	310	519	979,111
January, 1931	1,156	519	211	426	796,860

Note—Rocky Mountain data omitted.

tributed more than 6500 barrels of the new oil production obtained in the Louisiana Gulf Coast during January.

Texas Operations Decline

Texas drilling operations declined during January to a total of 416 wells completed, compared with 453 in December. New oil production was also lower; 163,545 barrels against 177,000 barrels in December. More than 100,000 barrels of new oil production was obtained from the East Texas and East Central Texas fields in Van Zandt and Rusk Counties during January. The Van area contributed 73,875 barrels of new oil production in January, while Rusk County's new producing area furnished a total of 19,480 barrels, from nine wells completed there. The Texas Gulf Coast contributed 27,789 barrels of new oil production in January, more than 14,000 barrels of which was obtained at Barbers Hill and Refugio. Hutchinson County, in the Texas Panhandle, yielded 13,345 barrels of new oil, of a total for the Panhandle district of 16,530 barrels. New production obtained in West Texas during January amounted to 10,780 barrels, of which Reagan County contributed 6630 barrels.

California drilling operations showed a decline in well completions of 36 wells and a slump in new oil production of about 40,000 barrels. Of a total new oil production of 30,820 barrels obtained in California, Playa del Rey contributed 17,110 barrels, Long Beach 5035 barrels and Ventura 5800 barrels. Lea County, New Mexico, furnished 34,508 barrels of new oil production during January, out of a total for Eastern New Mexico of 34,608 barrels.

Cities Service Acquires Mississippi Gas Rights

Jackson, Mississippi.—Amerada Petroleum Corporation has transferred to C. R. Hoffer of El Dorado, Arkansas, its gas rights on approximately 7800 acres of land in Hinds, Rankin, Madison and Yazoo Counties, Mississippi, for the nominal consideration of $1. It is generally believed that Hoffer represents Arkansas-Louisiana Pipe Line Company, a subsidiary of Arkansas Natural Gas Corporation of Shreveport, one of the Cities Service group. Gas rights were transferred on approximately 2500 acres in Hinds County and a similar amount in Rankin County, with 2000 acres in Madison and slightly over 800 acres in Yazoo County. Amerada Petroleum Corporation drilled a 5200-foot test in Yazoo County last year. Most of the acreage in Hinds and Rankin Counties is in the immediate vicinity of the gas producing area.

Summary of Field Operations, January, 1931

▼ ▼ ▼

Recapitulation—United States

	Completions	Producers	Gas Wells	Failures	Initial Production Oil	Initial Production Gas*	Total Production
Oklahoma	191	97	23	71	529,913	150	14,012,500
Kansas	44	21	12	11	13,250	145	3,297,450
Texas (outside Gulf Coast)	349	137	39	173	135,756	787¾	15,842,350
Gulf Coast	93	61	4	28	35,949	90½	5,853,550
North Louisiana	36	10	11	15	8,508	188¾	1,273,600
Arkansas	15	8	3	4	120	14¾	1,572,000
Eastern States	353	124	118	111	7,936	203¼	3,418,850
New Mexico	14	9	1	4	34,608	28¾	†
Rocky Mountains	a	a	a	a	a	a	2,996,950
California	61	52	..	9	30,820	...	16,607,200
Total for January	1,156	519	211	426	796,860	1,608¾	64,874,450
Total for December	1,479	650	310	519	979,111	2,217	(b)67,636,500

*Millions of cubic feet. †Included in Rocky Mountain estimates. (a) Not available. b—Corrected.

EASTERN STATES

NEW YORK

	Completions	Producers	Gas wells	Failures	Initial Production Oil	Initial Production Gas*	Total Prod.
Allegany	6	6	..	..	16	..	.....
Total	6	6	..	..	16	..	.....

PENNSYLVANIA

Allegheny	2	..	1	1	..	¼	.....
Bradford	20	20	..	..	41	..	.....
Butler	5	2	2	1	6	1½	.....
Center-Middle	4	4	..	..	10	..	.....
Clarion-Venango	9	4	3	2	9	1¾	.....
Greene	7	1	5	1	10	8¼	.....
Washington	7	3	1	3	59	2½	.....
Total	54	34	12	8	135	14¼	.....

SOUTHEASTERN OHIO

Jefferson	1	..	..	1	..	..	.....
Monroe	4	..	3	1	..	¾	.....
Morgan	8	1	5	2	2	2¼	.....
Noble	5	4	1	..	9	¾	.....
Washington	11	3	1	7	15	¼	.....
Total	29	8	10	11	26	4	.....

CENTRAL OHIO

Ashland	10	6	1	3	36	1¼	.....
Athens	7	..	2	5	..	¾	.....
Belmont	4	..	4	..	..	2½	.....
Fairfield	1	..	..	1	..	..	.....
Hocking	2	..	..	2	..	..	.....
Holmes	2	1	..	1	40	..	.....
Knox	2	1	..	1	7	¼	.....
Licking	5	1	2	2	135	½	.....
Loraine	4	..	3	1	..	5½	.....
Medina	13	8	..	5	95	..	.....
Meigs	1	1	..	..	1	..	.....
Muskingum	10	2	3	5	178	2	.....
Perry	8	2	4	2	12	3¾	.....
Stark	4	..	3	1	..	2¾	.....
Summit	4	..	3	1	..	5	.....
Vinton	1	..	1	..	..	1	.....
Wayne	3	..	1	2	..	¼	.....
Total	81	22	27	32	505	25½	.....

NORTHWESTERN OHIO

Auglaize	1	1	..	..	2	..	.....
Hardin	8	..	8	..	..	3	.....
Lucas	1	..	..	1	..	..	.....
Mercer	1	1	..	..	1	..	.....
Seneca	2	..	1	1	..	¼	.....
Wyandot	1	..	..	1	..	..	.....
Total	14	2	9	3	3	3¼	.....
Total Ohio	124	32	46	46	534	32¾	.....

INDIANA

Allen	1	..	1	..	..	¼	.....
Gibson	1	..	..	1	..	..	.....
Huntington	1	1	..	..	100	..	.....
Jay	1	1	..	..	40	..	.....
Knox	1	..	..	1	..	..	.....
Perry	2	..	..	2	..	..	.....
Pike	2	..	..	2	..	..	.....
Sullivan	1	..	1	..	..	¼	.....
Vandeburg	1	1	..	..	7	..	.....
Vigo	1	..	..	1	..	..	.....
Warrick	2	..	..	2	..	..	.....
Total	14	3	2	9	147	½	.....

KENTUCKY

	Completions	Producers	Gas wells	Failures	Initial Production Oil	Initial Production Gas*	Total Prod.
Barren	8	1	2	5	25	1	.....
Christian	1	..	1	..	..	1¼	.....
Clay	2	..	2	..	..	1	.....
Daviess	4	1	..	3	50	..	.....
Estill	1	..	..	1	..	..	.....
Hancock	4	4	..	..	161	..	.....
Hart	27	19	2	6	6,330	1¼	.....
Henderson	1	1	..	..	5	..	.....
Hopkins	1	..	1	..	..	2	.....
Johnson-Magoffin	2	1	..	1	3	..	.....
Knox	1	1	..	..	25	..	.....
Lee-Owsley	1	1	..	..	20	..	.....
Leslie	2	..	..	2	..	..	.....
Logan	1	..	..	1	..	..	.....
McLean	1	..	..	1	..	..	.....
Ohio	6	..	3	3	..	2½	.....
Wayne	2	1	..	1	4	..	.....
Wolfe	1	..	1	..	..	¼	.....
Total	66	30	12	24	6,623	9½	.....

ILLINOIS

Crawford	2	1	..	1	12	..	.....
Madison	2	1	..	1	2	..	.....
St. Clair	1	..	..	1	..	..	.....
Wabash	1	..	..	1	..	..	.....
Total	6	2	..	4	14	..	.....

WEST VIRGINIA

Boone	2	1	1	..	2	¾	.....
Cabell	1	..	1	..	..	1	.....
Calhoun	10	3	7	..	33	4	.....
Fayette	2	..	1	1	..	¼	.....
Gilmer	6	..	4	2	..	2½	.....
Harrison	2	1	1	..	1	1	.....
Kanawha	2	..	1	1	..	¼	.....
Lincoln	2	..	2	..	..	¼	.....
Marion	3	1	2	..	10	1½	.....
Marshall	2	..	1	1	..	1½	.....
Mason	1	1	..	..	4	..	.....
Mingo	2	..	2	..	..	2¾	.....
Ritchie	5	2	1	2	9	¼	.....
Roane	7	1	6	..	5	1¾	.....
Tyler	3	1	1	1	8	¼	.....
Wetzel	6	..	6	..	..	4½	.....
Wirt	2	..	..	2	..	..	.....
Wood	3	3	..	..	5	..	.....
Total	61	14	37	10	77	22½	.....

ALABAMA

Wildcats	3	..	..	3	..	..	.....
Total	3	..	..	3	..	..	.....

MISSISSIPPI

Alcorn	1	..	..	1	..	..	.....
Attala	1	..	..	1	..	..	.....
Hinds	4	..	4	..	..	26	.....
Monroe	1	..	1	..	..	½	.....
Rankin	4	..	2	2	..	95¾	.....
Total	11	..	7	4	..	122¼	.....

MICHIGAN

Claire	2	..	1	1	..	½	.....
Isabella	5	3	1	1	390	1	.....
Muskegon	1	..	..	1	..	..	.....
Total	8	3	2	3	390	1½	.....
Total Eastern States	353	124	118	111	7,936	203¼	3,418,850

KANSAS

	Completions	Producers	Gas wells	Failures	Initial Production Oil	Gas*	Total Prod.
Augusta-Fox-Bush	..	..	..	..	..	..	98,700
Barton	1	..	..	1	..	..	.....
Butler	2	1	..	1	100	..	.....
Churchill	..	..	..	..	..	..	115,500
Clark	1	..	..	1	..	..	.....
Cowley	5	3	1	1	315	1½	.....
El Dorado-Towanda	..	..	..	..	..	..	412,150
Florence-Covert	..	..	..	..	..	..	26,200
Greenwood	2	1	..	1	25	..	525,150
Harvey	2	1	..	1	300	..	.....
Marion	2	2	..	..	225	..	.....
McPherson	11	7	4	..	10,705	96½	.....
Morris	4	..	4	..	..	1½	.....
Morton	1	..	1	..	..	10½	.....
Oxford	..	..	..	..	..	..	76,450
Peabody-Ebling	..	..	..	..	..	..	64,250
Rainbow Bend	..	..	..	..	..	..	35,650
Rice	3	2	..	1	740	..	.....
Rush	1	..	1	..	..	32	.....
Russell	..	..	..	..	..	..	99,000
Sedgwick County	6	3	..	3	835	..	.....
Sedgwick	..	..	..	..	..	..	592,650
Stevens	1	..	1	..	..	3	.....
Sumner	2	1	..	1	5	..	.....
Voshell	..	..	..	..	..	..	430,750
Others	..	..	..	..	..	..	822,000
Total	44	21	12	11	13,250	145	3,297,450

OKLAHOMA

Allen	..	..	..	..	..	..	395,500
Asher	..	..	..	..	..	..	23,750
Blackwell	..	..	..	..	..	..	69,100
Bowlegs	..	..	..	..	..	..	374,050
Braman	..	..	..	..	..	..	59,650
Bristow-Slick	..	..	..	..	..	..	350,700
Burbank	..	..	..	..	..	..	421,900
Caddo	1	1	..	..	1,195	..	.....
Carr City	..	..	..	..	..	..	396,250
Carter	7	6	..	1	2,740	..	.....
Cleveland	1	..	..	1	..	..	.....
Coal	1	..	..	1	..	..	.....
Comanche	1	..	..	1	..	..	.....
Creek	19	11	4	4	270	12½	.....
Cromwell	..	..	..	..	..	..	134,750
Cushing	..	..	..	..	..	..	377,300
Davenport	..	..	..	..	..	..	27,750
Duncan	..	..	..	..	..	..	205,000
Earlsboro	..	..	..	..	..	..	544,150
East Earlsboro	..	..	..	..	..	..	555,800
East Little River	..	..	..	..	..	..	318,450
East Seminole	..	..	..	..	..	..	59,600
Fox	..	..	..	..	..	..	28,800
Garber	..	..	..	..	..	..	133,500
Grady	2	..	2	..	..	33	.....
Graham	..	..	..	..	..	..	82,050
Haskell	3	..	1	2	..	¼	.....
Healdton	..	..	..	..	..	..	294,000
Hewitt	..	..	..	..	..	..	175,050
Hubbard	..	..	..	..	..	..	28,350
Hughes	1	..	..	1	..	..	.....
Jefferson	1	..	..	1	..	..	.....
Kingfisher	1	..	..	1	..	..	.....
Konowa	..	..	..	..	..	..	513,050
Latimer	3	..	1	2	..	3	.....
LeFlore	1	..	..	1	..	..	.....
Lincoln	2	..	2	..	..	7½	.....
Little River	..	..	..	..	..	..	687,200
Logan	..	..	..	..	..	..	109,900
Love	1	..	..	1	..	..	.....
McIntosh	2	..	..	2	..	..	.....
Marshall	3	..	..	3	..	..	.....
Maud	..	..	..	..	..	..	86,550
Mission	..	..	..	..	..	..	199,800
Muskogee	16	2	3	11	105	20¾	.....
North Okmulgee	..	..	..	..	..	..	241,900
Okfuskee	5	3	1	1	50	½	.....
Oklahoma County	52	48	..	4	482,625	..	.....
Oklahoma City	..	..	..	..	..	..	2,479,700
Okmulgee	11	1	3	7	100	4½	.....
Osage County	5	3	..	2	68	..	.....
Osage	..	..	..	..	..	..	693,900
Papoose	..	..	..	..	..	..	64,600
Pawnee	3	..	..	3	..	..	.....
Payne	1	..	..	1	..	..	.....
Pearson	..	..	..	..	..	..	16,700
Pittsburg	4	..	2	2	..	36½	.....
Pontotoc	1	1	..	..	130	..	.....
Pottawatomie	7	4	..	3	4,600	..	.....
St. Louis	..	..	..	..	..	..	629,350
Sasakwa	..	..	..	..	..	..	127,950
Scholem-Alechem	..	..	..	..	..	..	362,550
Searight	..	..	..	..	..	..	183,350
Seminole County	12	9	1	2	37,520	18½	.....
Seminole	..	..	..	..	..	..	406,950
South Earlsboro	..	..	..	..	..	..	242,750
South Okmulgee	..	..	..	..	..	..	140,200
Stephens	10	3	1	6	410	11	.....
Thomas	..	..	..	..	..	..	16,600
Tonkawa	..	..	..	..	..	..	149,250
Tulsa	3	2	..	1	45	..	.....
Wagoner	11	3	2	6	55	2	.....
West Asher	..	..	..	..	..	..	267,400
Wewoka	..	..	..	..	..	..	172,750
Yale-Jennings	..	..	..	..	..	..	168,500
Others	..	..	..	..	..	..	991,650
Total	191	97	23	71	529,913	150	14,012,500

CALIFORNIA

	Completions	Producers	Gas wells	Failures	Initial Production Oil	Gas*	Total Prod.
Dominguez	..	..	..	..	..	..	303,800
Elwood	1	1	..	..	1,200	..	.....
Elwood-Goleta	..	..	..	..	..	..	1,013,000
Huntington Beach	..	..	..	..	..	..	703,700
Inglewood	..	..	..	..	..	..	463,700
Kern Front	1	1	..	..	250	..	.....
Kettleman Hills	..	..	..	..	..	..	712,500
Long Beach	14	14	..	..	5,035	..	2,860,100
Midway	1	1	..	..	400	..	.....
Midway-Sunset	..	..	..	..	..	..	1,685,600
Orella-Capitan	1	1	..	..	200	..	.....
Playa del Rey	27	27	..	..	17,110	..	1,143,700
Rincon	1	1	..	..	325	..	.....
Santa Barbara Mesa	1	1	..	..	500	..	.....
Santa Fe Springs	..	..	..	..	..	..	2,229,700
Seal Beach	..	..	..	..	..	..	519,500
Ventura	5	5	..	..	5,800	..	1,360,000
Wildcats	9	..	..	9	..	..	.....
Others	..	..	..	..	..	..	3,611,800
Total	61	52	..	9	30,820	..	16,607,200

MOUNTAIN STATES

WYOMING

Big Muddy	..	..	..	..	..	..	58,900
Elk Basin	..	..	..	..	..	..	21,550
Grass Creek	..	..	..	..	..	..	63,600
La Barge	..	..	..	..	..	..	53,600
Lance Creek	..	..	..	..	..	..	4,650
Lost Soldier	..	..	..	..	..	..	106,300
Oregon Basin	..	..	..	..	..	..	89,900
Rock River	..	..	..	..	..	..	65,300
Salt Creek	..	..	..	..	..	..	786,850
Others	..	..	..	..	..	..	132,350
Total	..	..	..	..	..	..	1,382,900

MONTANA

Cat Creek	..	..	..	..	..	..	35,300
Pondera	..	..	..	..	..	..	45,050
Sunburst	..	..	..	..	..	..	138,800
Others	..	..	..	..	..	..	1,550
Total	..	..	..	..	..	..	220,200

COLORADO

Florence	..	..	..	..	..	..	15,500
Fort Collins	..	..	..	..	..	..	35,650
Moffats	..	..	..	..	..	..	31,350
Others	..	..	..	..	..	..	51,750
Total	..	..	..	..	..	..	134,250

NEW MEXICO

Artesia	..	..	..	..	..	..	20,150
Eddy	5	1	1	3	100	3¼	4,850
Hobbs High	..	..	..	..	..	..	951,200
Hogback	..	..	..	..	..	..	12,550
Lea	9	8	..	1	34,508	25½	235,900
Rattlesnake	..	..	..	..	..	..	32,350
Table Mesa	..	..	..	..	..	..	2,600
Total	14	9	1	4	34,608	28¾	.....
Total Mountain States	a	a	a	a	a	a	2,996,950

(a)—Not available.

ARKANSAS

Champagnolle	..	..	..	..	..	..	141,300
El Dorado	..	..	..	..	..	..	120,900
Lisbon	..	..	..	..	..	..	24,800
Nevada	..	..	..	..	..	..	31,350
Ouachita	4	3	1	..	..	¼	.....
Smackover Heavy	..	..	..	..	..	..	1,055,150
Smackover Light	..	..	..	..	..	..	139,100
Stephens	..	..	..	..	..	..	26,350
Union	4	3	..	1	20	..	.....
Wildcats	7	2	2	3	100	14½	.....
Others	..	..	..	..	..	..	32,350
Total	15	8	3	4	120	14¾	1,572,000

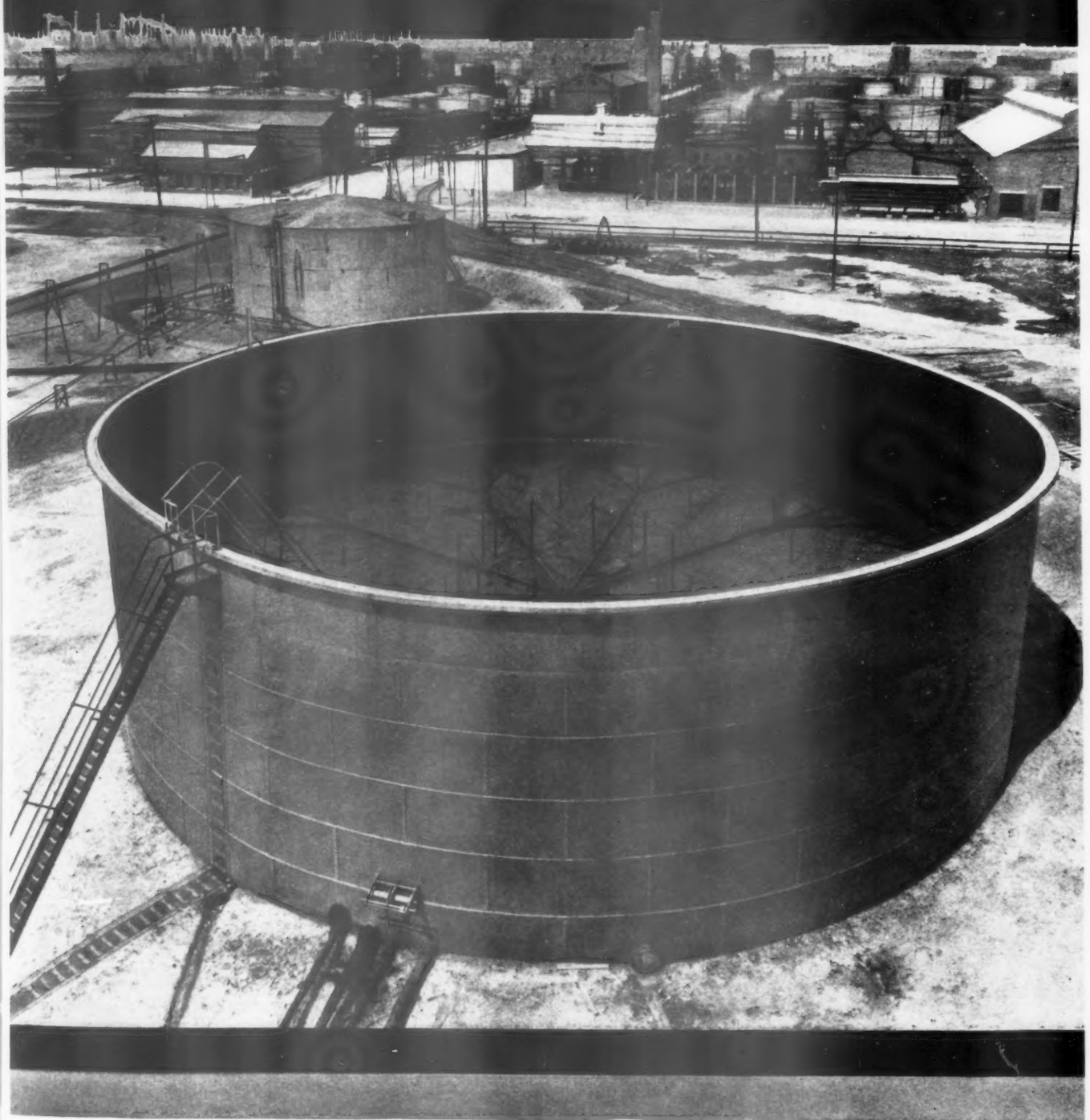
NORTH LOUISIANA

Bossier	2	..	2	..	..	6½	.....
Caddo	2	2	..	..	43	..	.....
Caddo Heavy	..	..	..	..	..	..	85,800
Caddo Light	..	..	..	..	..	..	252,300
Carterville	..	..	..	..	..	..	59,300
Cotton Valley	..	..	..	..	..	..	54,400
DeSoto-Red River	..	..	..	..	..	..	85,950
Haynesville	..	..	..	..	..	..	167,750
Holly	..	..	..	..	..	..	27,200
Homer	..	..	..	..	..	..	103,400
LaSalle	1	1	..	..	15	..	.....
Ouachita	2	..	2	..	..	6½	.....
Richland	6	..	6	..	..	154¾	.....
Sabine	4	2	..	2	375	1	.....
Urania	..	..	..	..	..	..	153,250
Zwolle	..	..	..	..	..	..	237,300
Wildcats	19	5	1	13	8,075	20	.....
Others	..	..	..	..	..	..	46,650
Total	36	10	11	15	8,508	188¾	1,273,600

TEXAS PANHANDLE

Carson	9	2	6	1	180	239	130,900
Gray	19	15	2	2	13,345	78	1,343,500
Hutchinson	4	2	2	..	155	66½	268,750
Moore	6	3	3	..	2,825	55	.....
Potter	1	..	1	..	..	6	.....
Wheeler	2	1	1	..	25	5	10,700
Others	..	..	..	..	..	..	9,050
Total	41	23	15	3	16,530	449½	1,762,900

The WIGGINS FLOATING ROOF *is a* MODERN oil storage tank ROOF ~



THE Wiggins Floating Roof is particularly adaptable for use on working tanks. The Wiggins Breather Roof reduces breathing losses on standing storage tanks.

See other side for details—

Check these advantages secured by modernizing with Wiggins Roofs

THE development of Wiggins Roofs has done for oil *storage* what modern practice has for refining, production and transportation — greatly reduced costs. Modernizing working tanks with Wiggins Floating Roofs gives you these advantages:

—Filling and breathing losses are reduced materially. The savings effected by Floating Roofs repay the difference in cost over ordinary cone roofs in a few months (see accompanying table of savings). Losses are stopped by keeping the air from coming in contact with the oil. The roof floats on the surface of the oil, effectively blanketing it at all levels. Loss of vapor between the roof and the tank shell is prevented by a seal which makes use of a unique principle—a tall narrow slot.

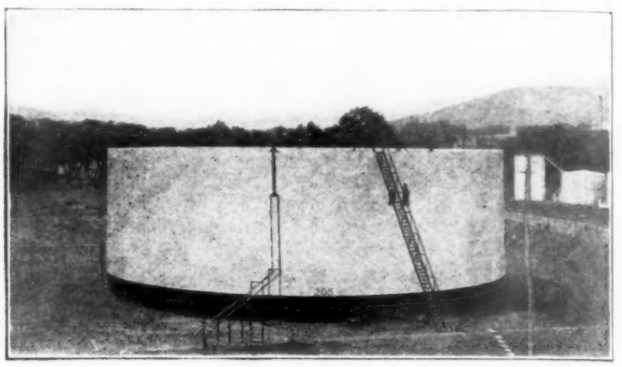
Length of Time Required to Pay for Wiggins Floating Roofs with Savings

Kind of Tank	Bbls. Handled per Day	Avg. Dia. (Feet)	Mos. to Pay Cost of Wiggins Floating Roof	Mos. to Pay Difference in Cost of Cone Roof and Wiggins Floating Roof
Gasoline Rundown Tanks	1,000	40	8	5
Gasoline (Motor Fuel)	5,000	117	8½	3½
Gasoline (Motor Fuel)	10,000	117	4¼	2
Gasoline (Motor Fuel)	5,000	60	4	2
Gasoline (Motor Fuel)	10,000	60	2	1
Crude (Avg. Mid-Cont.)	5,000	117	24	9
Crude (Avg. Mid-Cont.)	10,000	117	12	5
Crude (Avg. Mid-Cont.)	5,000	90	17	8
Crude (Avg. Mid-Cont.)	10,000	90	9	4

—Fire hazard is minimized with Wiggins Floating Roofs. The tanks and their contents—a considerable investment—are protected from destruction, and the interruption and disorganization which accompany a bad fire are avoided. Severe service under many conditions has demonstrated the effectiveness of Wiggins Roofs in removing fire hazard.

—Corrosion by high sulphur oil can be reduced. Since the Floating Roof is always in contact with oil, there is no opportunity for corrosive vapors to attack the roof plates. Corrosion of bottom plates is also reduced, since corroded material does not drop from the roof.

Over seven years' service in oil fields all over the world has proved the value of Wiggins Roofs as an investment in reducing costs.



80,000-bbl. oil storage tank at a refinery equipped with a Wiggins Breather Roof.

Wiggins Breather Roofs

Similar results, with standing storage tanks, are obtained with Wiggins Breather Roofs. Acting as a diaphragm, this roof is fastened to the top angle of the tank shell, and flexes up and down with vapor volume fluctuations. No vapor is vented out nor is air drawn in.

Other Products

Hortonspheroids and Hortonspheres for pressure storage of volatiles . . . . oil storage tanks, field erected, of all capacities . . . . cylindrical tanks, welded and riveted (from Birmingham, Ala., and Bridgeburg, Ont., plants) . . . . elevated water tanks . . . . standpipes . . . . smokestacks . . . . gasholders . . . . agitators, absorbers, condenser boxes, crude stills, bubble towers, and other refinery platework.

Our nearest office will gladly supply evaporation and fire data and cost estimates on Wiggins Roofs, tanks and any of the other products listed above.

CHICAGO BRIDGE & IRON WORKS

CHICAGO - NEW YORK - CLEVELAND - DALLAS - BOSTON
TULSA - HOUSTON - PHILADELPHIA - SEATTLE - HAVANA
DETROIT - SAN FRANCISCO - BIRMINGHAM

Plants at CHICAGO, ILL. - GREENVILLE, PA. - BIRMINGHAM, ALA. - BRIDGEBURG, ONT.

Texas Recapitulation

	Completions	Producers	Gas Wells	Failures	Initial Production Oil	Initial Production Gas*	Total Production
Panhandle	41	23	15	3	16,530	449½	1,762,900
South Texas	47	12	10	25	1,055	207½	2,442,850
North Texas	130	46	2	82	6,183	¾	1,895,150
East Texas	13	9	2	2	19,480	10¾	.....
East Central Texas	23	15	1	7	81,575	13	1,329,000
West Central Texas	47	4	9	34	153	18¾	809,900
West Texas	48	28	..	20	10,780	86½	7,602,550
Total Texas (outside Gulf Coast)	349	137	39	173	135,756	787¾	15,842 350
Gulf Coast	67	47	3	17	27,789	90	4,9/3,750
Grand Total	416	184	42	190	163,545	877¾	20,816,600

*Millions of cubic feet.

SOUTH TEXAS

	Completions	Producers	Gas wells	Failures	Initial Production Oil	Initial Production Gas*	Total Prod.
Atascosa	1	..	..	1	...	..	.....
Bastrop	1	..	..	1	...	..	.....
Bee	1	..	..	1	...	..	.....
Bexar	2	1	..	1	30	..	.....
Chapman	..	..	..	..	...	..	162,500
Cuellar	2	2	..	..	150	..	.....
Dale	..	..	..	..	...	..	7,750
Darst Creek	2	2	..	..	325	..	975,300
De Witt	1	..	..	1	...	..	.....
Duval	5	..	2	3	...	25	.....
Frio	1	..	..	1	...	..	.....
Goliad	1	..	..	1	...	..	.....
Gonzales	1	..	..	1	...	..	.....
Jim Hogg	2	..	..	2	...	..	.....
Laredo District	..	..	..	..	...	..	457,250
Live Oak	1	..	..	1	...	..	.....
Luling	..	..	..	..	...	..	301,700
Lytton Springs	..	..	..	..	...	..	24,500
Nueces	5	1	2	2	100	45	.....
Salt Flat	..	..	..	..	...	..	454,250
San Patricio	3	1	..	2	40	..	.....
Somerset	..	..	..	..	...	..	41,000
Starr	1	..	1	..	...	10	.....
Webb	5	2	..	3	75	..	.....
Wilson	1	..	..	1	...	..	.....
Zapata	10	3	5	2	345	127½	.....
Zavalla	1	..	..	1	...	..	.....
Others	..	..	..	..	...	..	18,600
Total	47	12	10	25	1,055	207½	2,442,850

EAST CENTRAL TEXAS

Boggy Creek	..	..	..	..	...	..	69,950
Corsicana-Powell	..	..	..	..	...	..	157,000
Currie	..	..	..	..	...	..	9,300
Joiner-Bradford	..	..	..	..	...	..	88,800
Mexia	..	..	..	..	...	..	119,900
Nigger Creek	..	..	..	..	...	..	5,500
Richland	..	..	..	..	...	..	4,650
Van Zandt	15	14	1	..	73,875	7	851,600
Wortham	..	..	..	..	...	..	18,750
Wildcats	8	1	..	7	7,700	6	.....
Others	..	..	..	..	...	..	1,550
Total	23	15	1	7	81,575	13	1,329,000

EAST TEXAS

Panola	1	..	1	..	...	¾	.....
Rusk	9	9	..	..	19,480	..	.....
Wildcats	3	..	1	2	...	10	.....
Total	13	9	2	2	19,480	10¾	.....

WEST CENTRAL TEXAS

Brown	5	..	1	4	...	1	131,800
Callahan	3	1	..	2	35	..	63,650
Coleman	9	1	1	7	5	1½	46,000
Comanche	1	..	..	1	...	..	.....
Eastland	5	..	3	2	...	7¾	122,950
Erath	2	..	..	2	...	..	.....
Hood	1	..	..	1	...	..	.....
Jack	3	..	1	2	...	¾	42,950
Palo Pinto	6	..	2	4	...	2¾	12,400
Parker	1	..	1	..	...	5	.....
Shackelford	3	..	..	3	...	..	124,300
Stephens	2	1	..	1	3	½	139,050
Throckmorton	..	..	..	..	...	..	18,650
South Young	6	1	..	5	110	..	68,150
Others	..	..	..	..	...	..	50,100
Total	47	4	9	34	153	18¾	809,900

WEST TEXAS

Crane	2	2	..	..	450	..	866,750
Crockett	..	..	..	..	...	..	62,850
Ector	1	1	..	..	230	..	226,500
Fisher	2	1	..	1	300	..	.....
Howard	4	2	..	2	35	..	771,800
Jones	3	3	..	..	740	..	40,700
Loving	1	1	..	..	210	..	.....
Mitchell-Scurry	2	2	..	..	165	..	61,300
Pecos	3	2	..	1	45	..	113,100
Reagan	2	2	..	..	6,630	86½	865,350
Taylor	1	1	..	..	35	..	.....
Upton	8	5	..	3	1,305	..	.....
Ward	6	6	..	..	635	..	.....
Winkler	..	..	..	..	...	..	1,615,800
Yates	..	..	..	..	...	..	2,819,150
Wildcats	13	..	..	13	...	..	.....
Others	..	..	..	..	...	..	194,250
Total	48	28	..	20	10,780	86½	7,602,550

NORTH TEXAS

	Completions	Producers	Gas wells	Failures	Initial Production Oil	Initial Production Gas*	Total Prod.
Archer	28	9	..	19	535	..	376,550
Baylor	1	..	..	1	...	..	.....
Burkburnett	..	..	..	..	...	..	221,500
Cooke	3	1	..	2	600	..	.....
Electra	..	..	..	..	...	..	269,000
Grayson	1	..	..	1	...	..	.....
Iowa Park-KMA	..	..	..	..	...	..	115,700
Montague	1	1	..	..	40	..	189,900
North Young	76	31	..	45	4,930	..	285,550
Throckmorton	8	..	2	6	...	¾	.....
Wichita	6	1	..	5	40	..	.....
Wilbarger	6	3	..	3	38	..	407,700
Others	..	..	..	..	...	..	49,250
Total	130	46	2	82	6,183	¾	1,895,150

TEXAS GULF COAST

Barbers Hill	6	6	..	..	7,400	..	687,850
Batson	1	1	..	..	2	..	34,150
Big Creek	..	..	..	..	...	..	88,450
Blue Ridge	..	..	..	..	...	..	45,050
Boling	..	..	..	..	...	..	29,300
Cedar Bayou	1	..	..	1	...	..	.....
Clay Creek	1	1	..	..	480	..	.....
Damon Mound	..	..	..	..	...	..	18,750
Deer Park	1	..	..	1	...	..	.....
Edna	2	..	2	..	...	40	.....
Esperson	4	3	..	1	460	..	77,100
Fannett	..	..	..	..	...	..	19,500
Fresno	1	..	..	1	...	..	.....
Goose Creek	..	..	..	..	...	..	134,000
Hankamer	1	1	..	..	910	..	73,650
High Island	2	2	..	..	1,820	..	.....
Hull	2	1	..	1	150	..	224,250
Humble	..	..	..	..	...	..	331,950
Lost Lake	1	1	..	..	480	..	.....
Montgomery	1	..	..	1	...	..	.....
Moss Bluff	1	..	..	1	...	..	9,450
Nash	1	1	..	..	500	..	.....
North Dayton	2	..	..	2	...	..	27,850
Orange	1	1	..	..	75	..	65,800
Orchard	1	1	..	..	650	..	74,500
Pettus	3	2	..	1	250	20	248,900
Pierce Junction	8	7	..	1	3,845	..	301,150
Port Neches	..	..	..	..	...	..	48,350
Raccoon Bend	3	2	1	..	350	30	266,900
Refugio	15	13	..	2	7,309	..	930,350
Saratoga	1	..	..	1	...	..	34,250
Somerville	..	..	..	..	...	..	64,700
Sour Lake	..	..	..	..	...	..	65,550
South Liberty	..	..	..	..	...	..	85,050
Spindle Top	4	4	..	..	3,100	..	393,350
Stratton Ridge	2	..	..	2	...	..	.....
Sugar Land	..	..	..	..	...	..	370,200
West Columbia	..	..	..	..	...	..	139,600
Wharton	1	..	..	1	...	..	.....
Others	..	..	..	..	...	..	83,750
Total	67	47	3	17	27,789	90	4,973,750

LOUISIANA GULF COAST

Bayou Blue	1	1	..	..	300	..	.....
Bayou Bouillon	..	..	..	..	..	..	3,100
Bayou Choctan	2	..	..	2	..	..	.....
Black Bayou	2	..	..	2	..	..	.....
East Hackberry	4	4	..	..	3,770	..	121,300
Edgerly	..	..	..	..	..	..	12,450
Evangeline	1	1	..	..	5	..	23,850
Hackberry	..	..	..	..	..	..	26,500
Houma	1	..	..	1	..	..	.....
Iowa	1	1	..	..	300	..	.....
Johnson Bayou	1	..	1	..	..	½	.....
Lake Barre	1	1	..	..	1,800	..	89,450
Lake Pelto	1	1	..	..	50	..	.....
Lockport	3	2	..	1	1,055	..	159,900
Napoleonville	2	..	..	2	..	..	.....
Port Barre	..	..	..	..	..	..	56,450
Sorrento	..	..	..	..	..	..	1,200
South Calcasieu Lake	1	..	..	1	..	..	.....
Sulphur	1	..	..	1	..	..	76,400
Sweet Lake	..	..	..	..	..	..	34,950
Vinton	4	3	..	1	970	..	174,700
White Castle	..	..	..	..	..	..	31,000
Others	..	..	..	..	..	..	68,550
Total	26	14	1	11	8,250	½	879,800
Total Louisiana	62	24	12	26	16,758	189¼	2,152,400

Completions for Past Week in U. S. Fields

▼ ▼ ▼

EASTERN STATES

PENNSYLVANIA

Company, Well and Location	Initial Production Bbls.	Depth
WASHINGTON COUNTY—		
Plymouth Oil & Gas Co., McClure 1	¶16	2450
Penn Oil & Gas Co., Ervanick 1..	¶15	....
Natural Gas Co. of West Virginia, McClain 1	¶2½	....
Unknown parties, Overholt 1	¶¾	....
GREENE COUNTY—		
Philadelphia Nat. Gas Co., Schultz 1	¶¼	3475
Greensboro Gas Co., Schultz 1	*	3002

WEST VIRGINIA

WOOD COUNTY—		
Stewart & Athey, Varner 1	2	....
Crawley & Carr, Varner 1	10	1020
KANAWHA COUNTY—		
Marshall & Price, Goshorn 60	5	....

KENTUCKY

OHIO COUNTY—		
Louisville Gas & Electric Co., Reynolds 3	¶1	....
S. H. Russell, Farmer 2	*	....
HANCOCK COUNTY—		
Whitmer & Snyder, Colley 3	*	....
WEBSTER COUNTY—		
Niagara Drilling Co., Melton Hrs. 1	*	....

SOUTHEASTERN OHIO

WASHINGTON COUNTY—		
Bumgard & Co., Ice 2	¶½	1512
Mark Anderson & Co., Flannery 2..	¶¼	1495
Duck Oil Co., Kinney 2	1	272
MORGAN COUNTY—		
Huffman & Co., Hoffman 6	¶¼	799
Ohio Fuel Gas Co., Harris 1	¶¼	637
NOBLE COUNTY—		
Frank Farrell, Hutcheson 5	¶¼-1	748
Shay McMullen, English 1	¶¼	1300

CENTRAL OHIO

MUSKINGUM COUNTY—		
McLaughlin Bros. Vensel 7	3	1049
The Atha Co., Arnold 1	21	4200
Wittmer Oil & Gas Co., Taylor 1..	¶¼	4422
MEDINA COUNTY—		
Ohio Fuel Gas Co., Bowman 1	¶¼	....
Edson & Co., Frank 11	25	456
Oko Oil & Gas Co., Essig 47	*	378
STARK COUNTY—		
East Ohio Gas Co., Blake 2	¶¼	4445
Wittmer Oil & Gas Co., Donneworth 1	¶½	3953
SUMMIT COUNTY—		
East Ohio Gas Co., Hausman 1	¶1½	4102
Stoltz Oil & Gas Co., Selzer 2	¶5	4038
LORAIN COUNTY—		
L. T. McGrath, Jarmush 1	¶¼	....
Wiser Oil Co., Robson 1	*	2394
ASHLAND COUNTY—		
Clifford & Kolb, Myers 8	6	709
PERRY COUNTY—		
Ohio Fuel Gas Co., Wilson 2	¶½	3602
ATHENS COUNTY—		
Clark Oil & Gas Co., Radford 1	¶¼	1247
LICKING COUNTY—		
L. C. Robinson & Co., Ruby 1	*	....

NORTHWESTERN OHIO

HARDIN COUNTY—		
Martin Oil & Gas Co., Martin 3..	¶½	1387
Bert Sheldon & Co., Kurt 2	¶½	1384
Barnaby & Co., Kurt 8	3	1397
SENECA COUNTY—		
Industrial Gas Co., Sorg 2	¶¼	....
Stahl 2	¶¼	....

INDIANA

DAVIESS COUNTY—		
James E. Young & Co., Robinson 1	¶½	900
GIBSON COUNTY—		
Texana Oil Co., McCullough 1	*	1317
PIKE COUNTY—		
H. H. Risher, Salyard 1	*	1133

ILLINOIS

CRAWFORD COUNTY—		
Pinkstaff & Co., Ferrell 1	*	....
W. C. McBride, Inc., Magill 3	18	970

MISSOURI

ST. LOUIS COUNTY—		
Huffman Bros. Construction Co., Fee 1	*	909

For Tabulation and Comparison See Market Section

MICHIGAN

Company, Well and Location	Initial Production Bbls.	Depth
ISABELLA COUNTY—		
The Pure Oil Co., Burrows 2	300	....
Ohio Producing & Refg. Co., Epple 4	200	3660
A. R. Beadle, Grover 1	100	....

OKLAHOMA

MUSKOGEE COUNTY—		
W. J. Metzger, McDaniel 5, nw c se se 6-14-19e	20	825
OKLAHOMA COUNTY—		
Westgate Oil Co., Kelsey 1 cel sw sw nw 10-11-3w	6530	6405
Thomas B. Slick Estate, Classen 4, se nw nw 2-11-3w	18,335	6247
Frisco 1, ne c se 3-11-3w	9820	6255
Phillips Pet. and Shaffer O&R, Ashcan 1, ne c 3-11-3w	8585	6277
Anderson-Prichard Oil Corp. and Phillips Pet., Rayhill 1, sw nw ne 10-11-3w	7475	6360
Anderson-Pritchard and Phillips Wright 1 cwl ne sw ne 10-11.3w	5925	6300
Dengail Oil Co., Schillings 1, nw c se se 10-11-3w	11,585	6307
Blackwell O&G and Jone Drlg. Co., Schillings 1, se c ne ne sw 10-11-3w	7320	6325
I. T. I. O., Lemmon 5, ne nw se 11-11-3w	270	6278
I. T. I. O. et al, Pasadena Heights 3, nw ne sw, 14-11-3w	1780	6270
Mid-Kansas O&G et al, Messer 1, sw c 32.14-3w	310	6698
PITTSBURG COUNTY—		
Choctaw Gas Co., Hendrickson 1, sw ne se 8-7n-18e	¶12	1825
SEMINOLE COUNTY—		
Deep Rock Oil Corp., Douglas 3, se c nw 30-8-8e	¶81	2970
Douglas 2, ne c sw 30-8-8e	8280	3080
Ligon, Todd et al, Wilson 1, nw c ne 30-8-8e	115	3167
Gypsy Oil Co., Charty 1, ne se sw 29-6-6e	2675	2555
Magnolia Pet. Co., Harjo 3, "A", nw ne ne 14-7-6e	¶25	3183
WAGGONER COUNTY—		
H. H. Orr, Grayson 5, c se sw 34-17-18e	¶½	405
Cartwright and Kyle, Andy 1, csl sw se, 35-17-18e	*	937

KANSAS

COWLEY COUNTY—		
Hough et al, Thurlow 1, sw c se 35-32-4e	*	735
Pyle et al, Pudden 1 (owdd) c se ne 16-35-4e	*	1888
GOVE COUNTY—		
Valerius O&G et al, Sampson 1, nw c 24-13-27w	*	4813
McPHERSON COUNTY—		
E. J. Jones and Shell Pet., Flook 1, sw c ne 1.20-2w	2740	2979
PAWNEE COUNTY—		
Phillips Pet. Co. and Deep Rock, Culbertson 1, c ne 27-20-18w	*	4271
RUSSELL COUNTY—		
Signal Oil Co., Rude 1, ne se se, 28-15-13w	310	3349
SEDGWICK COUNTY—		
Derby Oil Co., Cloud 1, (owdd) se c sw 19-27-2e	300	3305
SUMNER COUNTY—		
Harris and Haun et al, Duncan 1, c ne sw 15-35-2e	60	3440

NEW MEXICO

LEA COUNTY—		
Midwest Ref. Co., State 11, Sec. 9	¶2½-875	4175

CALIFORNIA

Company, Well and Location	Initial Production Bbls.	Depth
ELWOOD—		
Barnsdall Oil Co.-Rio Grande Oil Co., State 88-7	11,000	3335
KERN RIVER—		
California Star Oil Co., No. 40-4	200	2610
KETTLEMAN HILLS—		
Petroleum Securities Co., Felix 2..	5200	8100
LONG BEACH—		
Richfield Oil Co., Augustine 1	100	4745
Shell Oil Co., Babb 7	25	5050
MT. POSO—		
General Pet. Corp., Sill 9	70	2225
PLAYA DEL REY—		
Goodfield Pet. Co., No. V-1	400	5810
H. L. J. Oil Co., No. 2	450	4380
Thos. Kelly & Son, P. E. 1	600	5840
Mohawk Oil Co., No. L-2	600	5903
Pacific Shore Oil Co., Bruck 3	2600	6080

NORTH LOUISIANA

BOSSIER PARISH (Elm Grove)—		
United Prod. Corp., F. B. Treat 1, 14-17-12	¶4	1765
CADDO PARISH (Pine Island)—		
Texas Co., J. F. Herndon 8, 14-21-15	35	3902
RICHLAND PARISH—		
Southern Carbon Co., Hixon 1, 33-16-6e	¶37½	2444

LOUISIANA GULF COAST

VINTON—		
Gulf Ref. Co. of La., Gardiner Estate 2, wo	*	3970

SOUTH TEXAS

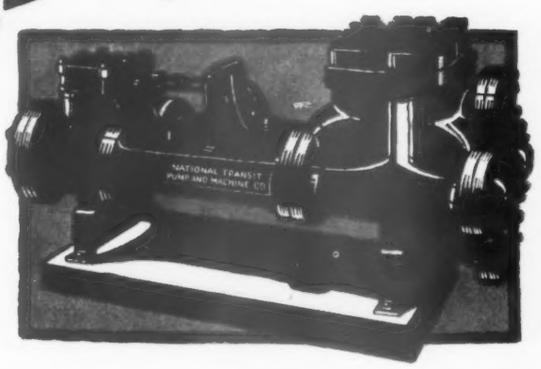
DUVAL COUNTY—		
Gulf Prod. Co.'s Mrs. R. Shaeffer	*	2700
GUADALUPE COUNTY (Darst Creek)—		
Humble O&R Co.'s Denman 21-A	1100	2590
LIVE OAK COUNTY—		
Houston Oil Co.'s Boothe 1-A	63	5277
Cartwright 22	*	6023
NUECES COUNTY (Saxet pool)—		
Moody-Seagraves Prod. Co.'s Smith 1	¶40-60	4088
REFUGIO COUNTY (Refugio Field)—		
E. M. Jones' Blk 106 Townsite	475	6457
Moody-Seagraves Prod. Co.'s Heard 3-B	175	3661
United Prod. Co.'s O'Brien 5	600	6459
ZAPATA COUNTY (Muckelroy pool)—		
J. I. Newton's I. G. Trevino 2	35	1275
S. R. & C. Oil Co.'s Trevino 12-A	35	1286

TEXAS GULF COAST

AUSTIN COUNTY—		
Arkansas Nat. Gas Co., Machemehl 1	*	5005
CHAMBERS COUNTY—		
Chicago Oil Corp., Lawrence 1	*	5020
CLAY CREEK—		
Sun Oil Co., Freeman 1	*	3638
Janner 4	*	5517
Gulf Ref. Co., Ezzell 1	*	7095
HOCKLEY—		
Midway Oil & Royalties Co. Warren 1	*	480
HUMBLE—		
Jno. A. Deering Graef 1	450	4400
Sun Oil Co., Bender 18	*	4872
MOSS BLUFF—		
Texas Gulf Sulphur Co., Carter 1	*	1812
RACCOON BEND—		
Humble-Valley, Sherrod 3	*	len.
SARATOGA—		
Rio Bravo Oil Co., Cotton 108-A	10	490
SPINDLE TOP—		
Yount-Lee Oil Co., McFadden 53 wo	*	2900
McFadden 122 wo	20	4600

(Continued on page 80)

Living up to a Lithograph



Great things have always been expected of TRANSIT products.

This requires eternal vigilance on our part. A TRANSIT pump or a TRANSIT engine which has rendered the utmost in satisfactory service is looked upon as merely fulfilling the expectations. On the other hand, if a TRANSIT machine does give trouble, then the reaction is opposite--it is not what was expected--and much ado is made about what would ordinarily be considered insignificant.

But we would not have this changed. It is as it should be. We find it a very steadying influence in these days of fads and faddists. The purchaser is generally interested in securing the greatest number of barrels pumped for the least possible pumping investment. We recognize this fact and have always built our pumps accordingly.

Design and material are considered sub-servient to performance. Change is considered only when it will lower the pumping cost per barrel.

Los Angeles
Tulsa
Houston

NATIONAL TRANSIT
PUMP & MACHINE CO.
OIL CITY, PA.

New York
Philadelphia
Cleveland
Pittsburgh

TULSA and MID-CONTINENT FIELD
Frick-Reid Supply Corporation

NEW ORLEANS, LA.
Woodward, Wight & Co.

SALT LAKE CITY, UTAH
F. C. Richmond Machinery Co.

LOS ANGELES
Republic Supply Company of California

BEAUMONT, TEXAS
E. L. Wilson Hardware Company

PHOENIX, ARIZ.
Pratt-Gilbert Co.

ST. LOUIS, MO.
Reeves & Skinner Machinery Co.

Permits Granted for New Wells

▼ ▼ ▼

CALIFORNIA

KERN RIVER—General Pet. Corp., Sill 4, 26-28-27.

LOS ANGELES COUNTY — The Mesmer City Realty Co., No. 1, 24-2-15. Staple Oil Co., Community 1, 24-3-15.

NEWHALL — Electrological Pet. Corp., Overman 1, 6-3-16.

PLAYA DEL REY—Union Oil Co., King Vidor 1, 27-2-15.

RIVERSIDE COUNTY—Frank Beck No. 1, 1-3-1.

TORRANCE—Corniel Oil Corp., No. 1, 31-3-14.

ARKANSAS

SCOTT COUNTY—Waldren Oil & Gas Co., T. B. White 1, 1400 ft n and 1600 ft e sw cor of sec 17-3-29.

POPE COUNTY—Ark.-La. Pipe Line Co., Mrs. M. H. Baird 1, 760 ft s and 660 ft e nw cor of sec 11-7-20.

CRAWFORD COUNTY—Citizens Gas Co., G. W. Hood 1, 600 ft s and 300 ft e nw cor ne¼ se¼ 18-9-32.

UNION COUNTY—Marine Oil Co., Thompson 2-B, 330 ft e and 330 ft n sw cor se¼ ne¼ 10-18-13.

KANSAS

BUTLER COUNTY—Mauck et al, Skaer 1, cwl ne nw 30-27-5e.

COWLEY COUNTY — Roth and Faurot, Brant 4, sw c ne 12-32-4e. Fisher et al, Hunt 1, sw se se 11-34-3e.

ELLSWORTH COUNTY—Gilmore Oil Co., Sturm 1, nw c sw 31-17-9west.

MARION COUNTY—Youker et al, Riffel 2, sw c 11-17-4e.

McPHERSON COUNTY—Olson and Shell Pet. Corp., Russell 1, c se se 3-19-2w. Twin Drlg. Co., Phillips Pet. and Shell, Dielman 1, c ne nw 22-19-2w. Shell Pet. Corp. and Olsen, Johnson 1, (owd) se nw se 36-19-2w. Mid-Kansas O&G, Whitwright 1, sw c 30-19-1w. Lario O&G and Shell, Locquenent 1, nw sw ne 6-20-1w.

SEDGWICK COUNTY—Graham Bros. Oil Co., Rapp 2, sw nw nw 22-26-2e.

STEVENS COUNTY—Texas Interstate Pipe Line Co. and Phillips Pet. Stuart 1, c sw 12-34-38w. Texas Interstate Pipe Line Co. and Stevens County O&G, Stuart 1, c se 12-34-38w.

OKLAHOMA

CARTER COUNTY—Carter Oil Co. et al, Hooks 2, ne se ne 24-1s-3w.

GARFIELD COUNTY — Mid-Kansas O&G and Ramsey Pet., Artholt 1, nw se se 33-24-3w.

HUGHES COUNTY—McGee Bros., Deer 1, se sw sw 3-9-10e.

LATIMER COUNTY—Limestone O&G, Kilpatrick 1, c se se 16-5n-18e.

LOGAN COUNTY—Blackwell O&G, Quigley 1, (owdd) se nw sw 21-18-4w.

MUSKOGEE COUNTY—D. L. T. Oil Co. et al, Mackey 2, sw c se sw sw 9-15-18e (owd).

NOBLE COUNTY — Magnolia Pet. Co., Robertson 1, se ne se 21-21-2w.

OKMULGEE COUNTY — D. M. Logan, Pigeon 1, se c ne 31-15-13e; Miller et al, Kimyarye 1, se c nw nw 32-15-13e. Keithley and Smith, Harris 3, (owd) se c ne se 1-14.14east.

OKLAHOMA COUNTY—Hall and Briscoe, Townlot 1, csl sw sw se 3-11-3w. Champlin O&R and Hall and Briscoe, Townlot 1, ne c sw sw se 3-11-3w. Hall and Briscoe, Townlot 1, nw c se sw se 3-11-3w. Champlin O&R and Hall and Briscoe, Townlot 1, csl ne sw se 3-11-3w. Champlin O&R and Hall and Briscoe Townlot 1, ne c sw se se 3-11-3w. Phillips Pet., Nellie 1, se c sw se ne 3-11-3w. Hall and Briscoe, Townlot 1, ne c nw se se 3.11-3w. Danciger O&R, Burrus 1, se c sw 10-11-3w. I. T. I. O., M. K. T. 6, nw sw sw 35-12-3w.

PITTSBURG COUNTY—Mid-Western O& G. Trekell 2, c n/2 ne nw 14.7-18e.

POTTAWATOMIE COUNTY—Gypsy Oil Co., Horn 4, ne nw ne 23-6-3e. Arma Drlg. Co., Duff 1, ne nw sw 10-7-4e.

For Tabulation and Comparison See Market Section

SEMINOLE COUNTY — Gypsy Oil Co., Charty 2, se c sw 29-6-6e. Magnolia Pet. Co., Hyde-Swan 2, nw sw se 29-6-6e.

WAGONER COUNTY — Wm. LaPierre Gregory 1, ne c se nw, 19-17-17e.

TEXAS

ARCHER COUNTY — Hedrick-Camp Drilling Co., Wichita Falls, S. Webb, 40, 2, I&GN sur, 150 ft from n and 450 ft from w line of blk. 9. Steele Drilling Co., Wichita Falls, G. A. Lauster, 30, 1, S 2, S. P. Ry sur, 150 ft from n and w lines.

AUSTIN COUNTY — Humble O&R Co., Houston, R. G. Paine, 11, W. C. White sur, 4706 ft from nw and 200 ft from ne line.

BEE COUNTY—Rowan & Hope Inc., San Antonio, F. Goree, 100, 2, S 4, T. B. Barton sur, 300 ft from w and 600 ft from s line.

BEXAR COUNTY — Gatlin Oil Co., San Antonio, I. A. Beck, 279, 5, Montez sur, 300 ft se of 4. Ingersoll & Miller, San Antonio, M. J. Sanner, 128, 1, F. A. Ruiz sur, 243 ft se of center of nw line.

BLANCO COUNTY — J. E. Page et al, Blanco, Cox, 2000, 1, 18, Rutersville sur, 4500 ft from w and 500 ft from s line.

BROWN COUNTY—E. W. McCrary, Tulsa, Smith-Cott, 14A, B 10, Millcrest sur, north central part of lot 1.

CHAMBERS COUNTY—Yount-Lee Oil Co., Beaumont, Chambers County Agricultural Co., 205, 18, Wm. Bloodgood sur, 215 ft from n and 1500 ft from w line; 19, 300 ft w of 18. Mills Bennett Prod. Co., Houston, Higgins, 14, 5, Wm. Hodge sur, 50 ft from w and 65 ft from n line. Texas Co., Houston, Winfree, 75, 3, W. D. Smith sur, 50 ft from n and e lines; 2, 50 ft from center of e line.

COOKE COUNTY—T. P. Coal & Oil Co., Fort Worth, C. Jacobs, 40, 1, R. Jones sur, 150 ft n of center of s line.

COLEMAN COUNTY—Guffey Bros., Baird, Lovelady, 200, 1, S 275, B. Alderata sur, 150 ft from w and 2780 ft from s line.

COLLIN COUNTY—Roy I. Carter, Wichita Falls, A. J. Malone, 85, 1, B. Brewton sur, 760 ft from n and 750 ft from e line.

CLAY COUNTY—Ray Dawson, Oklahoma City, W. C. Kelley, 125, 1, B 74, P.C.S.L. sur, 660 ft from n and 330 ft from w line.

DUVAL COUNTY—Al Buchanan et al, San Antonio, Wood-Welch, 233, 2, S 102, Alexander sur, 1830 ft from e and 375 ft from s line.

EASTLAND COUNTY—Rover Drilling Co., Cisco, W. G. Herring, 80, 1, S 15, B 2, H&TC sur, 990 ft from n and 150 ft from e line. Lone Star Gas Co., Dallas, Grove, 160, 1, S 484, S. P. Ry sur, 330 ft from s and 382 ft from w line sw¼.

ECTOR COUNTY—Penn Oil Co., Dallas, E. Cowden, 640, 1, S 12, B 44, twp. 2s, se cor of section.

GRAY COUNTY — McIlroy Oil Co., Amarillo, C. Baer, 160, 7, S 126, B 3, I&GN sur, 330 ft from s and w lines of sec. Kewanee Oil & Gas Co., Tulsa, Rest, 240, 3, S 149, B 3, I&GN sur, 330 ft from n and w lines of w½ nw¼.

GRAYSON COUNTY—F. H. E. Oil Co. et al, Fort Worth, Conn, 160, 1, T. Grace sur, center of sw¼ of nw¼.

GREGG COUNTY—D. H. Byrd, Dallas, J. S. Elder, 320, 1, W. J. McCurry sur, 200 ft from n and w lines. M. Camorras, 817, 1, H. Edwards sur, 1528 ft from n and 2305 ft from w line. W. L. Brandon et al, Fort Worth, J. F. Richards, 10, 1, M. Van Winkle sur, 150 ft from n and w lines. J. E. Farrell, Fort Worth, J. K. Lathrop, 96, 1, W. Robinson sur, 661 ft from n and 110 ft from n and w line.

GUADALUPE COUNTY — Magnolia Pet. Co., Dallas, M. T. Klein, 100, 7, J. W. Robinson sur, 300 ft ne of 2.

HALE COUNTY—Wm. Groat, Lubbock, G. W. Heard, 600, 1, S 24, B4, SCSL sur, 200 ft from n and e lines of sec.

HARDIN COUNTY — Rio Bravo Oil Co., Houston, Fee, 158, C110A, J. F. Cotton sur, 50 ft w and 200 ft n of C91A.

HARRISON COUNTY — Corona Pet. Co., Fort Worth, A. J. Bohler, 206, 1, S. F. Sparks sur, 1695 ft from nw and 1272 ft from ne lines.

HUTCHINSON COUNTY—Stanolind O&G Co., Pampa, R. C. Ware, B, 160, 3, S 124, B 4, I&GN sur, north central part of lease. Pitcher, A, 160, 2, S 19, M21, TC Ry sur, 990 ft n of 1A.

JOHNSON COUNTY—C. E. Windham, Dallas, O. P. Lightfoot, 40, 1, J. Walker sur, 823 ft from nw and 214 ft from ne line.

JIM WELLS COUNTY—Carsill Oil & Gas Co., San Antonio, J. C. McGill, 640, 1, W. D. Baldwin sur, 1665 ft from w and 624 ft from s line.

KERR COUNTY — W. H. Gant, Ardmore, Mears, 640, 1, S 1605, CCSD&RGNG sur, 190 ft from s and w lines of of sec. J. E. Young, 160, 1, S 28, A. E. Bruce sur, 150 ft from n & w lines of sec.

LIBERTY COUNTY—Humble O&R Co., Houston, R. Sergent, 2, J. McFadden sur, 500 ft s and 350 ft e of 1.

NACADOCHES COUNTY—Scully & Harwell, Nacadoches, R. I. Driver, 298, 1, Torres sur, 550 ft from n and 700 ft from w line.

PALO PINTO COUNTY—Mook-Texas Oil Co., Fort Worth, C. Rexroat, 80, 1, B. F. Mayo sur, 1595 ft from n and 435 ft from e line. Brazos River Gas Co., Mineral Wells, D. M. Crossland, 160, 1, T. & P. Clayton sur, 500 ft from n and w lines. P. Owen, 87, 1, S 43, B 1 ,T&P sur, 175 ft n of center of s line.

RUSK COUNTY—Humble Oil & Refg. Co., Houston, L. D. Crim, 628, 2, E. G. Sevier sur, 150 ft from s and 1826 ft from e line; 3, 194 ft from s and 2438 ft from e line. C. H. Tautenhahn et al, Henderson, W. M. Camp, 5, 1, J. Ximinez sur, 150 ft from n and 596 ft from w line. Petroleum Marketing Corp., Houston, M. W. Camp, 5, 1, J. Ximinez sur, 197 ft from n and 276 ft from e line . Lide-Talor Oil Co., Inc., Tyler, C. Young, 40, 1, M. F. Pru sur, 200 ft from n and e lines. W. B. Hamilton et al, Wichita Falls, W. M. Camp, 1, J. Ximinez sur, 150 ft from s and w lines. Cordova-Union Oil Corp., Fort Worth, C. O. Christian, 34, 1, R. E. Wynne sur, 150 ft from n and e lines. Tidal Oil Co., Fort Worth, L. Toliver, 15, 1, J. Ximinez sur, 197 ft from w and 150 ft from s line. R. W. Giles, Shreveport, N. Orr, 202, 1, Wm. Tippett sur, 360 ft from n and 400 ft from e line. H. R. Smith, Longview, D. M. Patterson, 36, 1, I. Ruddle sur, 150 ft from w and 160 ft from s line.

REAL COUNTY—L. L. Evans, Brownwood, J. M. Auld, 640, 1, S 15, HE&WT sur, 150 ft from e and 450 ft from s line.

REFUGIO COUNTY — Moody - Seagraves Production Co., San Antonio, Mercy, 50, 2, blk. 6, Refugio sur, 166 ft n of center of s line.

ROCKWALL COUNTY — A. W. Walker, Dallas, P. Snow, 80, 1, J. E. Sherwood sur, 1050 ft from e and 150 ft from n line sur.

SHACKELFORD COUNTY—H&H Drilling Co., Seminole, B. S. Walker, 60, 4, 381, TE&L sur, 300 ft s of 2. P. S. Kendrick, Albany, T. McCastland, 11, 1, S 1, Blind Asy. sur, 150 ft from n and 450 ft from e line.

THROCKMORTON COUNTY—T. B. Knox, Breckenridge, Reynolds, 160, 4, A. Tartar sur, 450 ft n and 500 ft from w line of sur.

UPTON COUNTY—G. E. Farley, Rankin, J. F. Lane, 40, 1, S 36, B 1, MK&T sur, 330 ft from s and w lines of nw¼ of sw¼.

WICHITA COUNTY—Mogren & Anderson, Electra, E. E. Goetze, 166, 25, SA&MG No. 2 sur, 300 ft e of 24. J. L. Swanner, Wichita Falls, Williams-Parker, 160, 3, Cowherd sur, 1120 ft from w and 450 ft from s line blk. 15. R. L. Arrington, Electra, H. A. Overall, 80, 1,

Wildcat Reports From All Sections

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SOUTH TEXAS

BANDERA COUNTY—Permian Oil Co.'s Taylor 1, 15 miles e Bandera on Red Bluff creek, near Kendall line, dr 300 ft.

BASTROP COUNTY—Turner, Wharton & Anderson's J. E. Harris 1, 150 ft w of ne line and 150 ft n of line between Harris and Mason tract in Joshua Gray sur, 2 miles n Dale pool, dk. Bolling et al's McWilliams 1, George T. Glasscock sur, sd 2240 ft. Pacific O&G Co.'s Litton 1, sd 2520 ft.

BEE COUNTY—Southern Exploration Co.'s Theis 1, on T. B. Slick block, sw Theis-Slick well, lcn to be made. J. S. Mauldin Fee 1, G. A. Kerr sur, just s Pettus townsite, resume dr 3734 ft, cored sand 3802-3208 ft, coring deeper. Rowan and Hope's Mrs. Fannie Goree, T. B. Barton sur, 5 miles w Grayburg pool, to re-dr after completing water well. E. S. Price's Weiss 2, standing 4552 ft; Weiss 3, lcn. Simms Oil Co.'s Holzmark, one-fourth mile e No. 1, in James A. York sur, No. 333, prep to perforate csg 3570-90 ft after recementing. United Prod. Co.'s Ray 32, 3 miles n Pettus pool in Hambermacher sur, dr 350 ft; Ray 34, 900 ft e Ray 26 producer in Thomas Manson sur, dk.

BEXAR COUNTY—Penn Oil Co.'s Cocksey 1 (discovery test) in Rialls sur, 11 miles e San Antonio, prep to work over and lower casing from 837 ft, sand topped 1410 ft, total depth 1461 ft. Weilbacher and Brock's Ernest 1, 2 miles n Somerset in J. Christopher sur, ba led some oil 915 ft to 925 ft.

BLANCO COUNTY — Adams and Lysle's Leeders 1, sur No. 29, 5 miles w Blanco City, dr 855 ft. Meeks et al's Walker 1, ne cor Noel Nixon sur No. 23, 4 miles n Blanco City, fsh 1025 ft. Forest Oil Co.'s (Rosenfield et al's) Hohenberger 1, sur 94, moving on larger rig, total depth about 550 ft. Hardy Sitton's McMillen 1, 2 miles w Blanco City, Benjamin Williams sur No. 125, prep to re-dr, 570 ft.

BROOKS COUNTY—Ed East's Garcia 3, Las Mastena y Gonzalene grant in Lassiter area, standing 1002 ft. Houston Oil Co.'s Wormser-Holbein 3, Palo Blanco de Maguellas grant on Palo Alto Creek, dr 1352 ft.

COMAL COUNTY—Caldwell and Lanier's T. J. Byler 1, HE&WT sur No. S-894, 10 miles s Blanco City, pulling 8-inch csg to ream down and set 10-inch csg for deep test, total depth 600 ft.

DUVAL COUNTY—F. M. Frasher and R. F. Schoolfield's Bishop Duval Land Co. 2, Sur. 135 in sw extension of S. & O. pool, setting 6⅝-inch after topping sand at 2271 ft. Gulf's Mrs. R. Shaeffer 1, blk 285, sur 32, abn 2700 ft. Humble's Kohler 50, sur 164, Kohler pool, dr 3875 ft. Southern Oil Co.'s King Harper 2, sur 323, lcn. A. Buchanan's Welder Wood 2, sec 102, 1830 ft from e line and 375 ft from s line, n part of county, spudded 2-4-31, dr 670 ft. Vacuum & S. R. & C. Oil Co.'s Duval County Land Co. 3, sur 97, 300 ft ne discovery well, 2850 ft n of sw corner sec 293, lcn. O'Byrne et al Weil Bros. 1, 300 ft from s and e lines of B. S. & F. sur No. 368, 7 miles sw of S. & O. pool, moving on.

FRIO COUNTY—Wray and Dunbar's Barnes 1, 1 mile from Big Floor on sec 123, still fsh for drill pipe, showed gas at 2311-68 ft, total depth 3708 ft.

GOLIAD COUNTY—Slick estate's Allen 1, 1500 ft se discovery well on O. Marshall sur, dr 1895 ft. Gibson Oil Co.'s Parks 1 (wo), 5 miles ne Goliad, well originally abn 5267 ft, showing some gas, now bailing down about 2500 ft to test.

GUADALUPE COUNTY (Darst Creek field)—Humble's L. G. Denman 21-A, A. S. Emmett sur, prod 1100 bbls at total depth 2590 ft, csg set 2561 ft; L. G. Denman 22-A, 300 ft e No. 20-A, mov on. Sun Oil Co.'s Knoblock 13, J. W. Robinson sur, set 6⅝-inch cas 2550 ft. Magnolia's Klein 7, dr 1045 ft; Annie Knodle 5, lcn; M. E. Roamell 1 (wo), dr 2415 ft, being deepened from crevice at 2321 ft.

GUADALUPE COUNTY (Wildcat Area)—Luling Oil and Gas Co.'s Nixon 1, east of Darst Creek field, lcn.

HAYS COUNTY—Harley and Whittington's Heidenreich 1, cleared hole at 2427 ft, prep to re-dr.

JIM WELLS COUNTY — Prairie Lee Oil Co.'s Oppenheimer 1, dr 565 ft. Blair and Son and Stewart's M. Perez 1, sec 9 blk 16, re-dr, now at 1980 ft. R. H. Ewell's Doering 1, 600 ft se old Diamond S test, blk 6, Seefeld Farms Lots sub, dk. Carsill O&G Co.'s McGill 1, 1665 ft from w line and 654 ft from s line of Wm. D. Baldwin sur, 3 miles n Armagosa, dk. Gulf Prod. Co.'s Mrs. Shaeffer 2, 1000 ft from ne and se lines of J. Pointevent sur No. 1, near Duval line, dk.

JACKSON COUNTY—Texas Unity Oil Co. (Trinity Drillers) C. E. Hungerford 1, 2 miles e Edna gas field in H. Smith sur, dr 3345 ft.

HIM HOGG COUNTY—J. D. Pulliam, Jr.'s, Jones 1, Holden sub, Diego Hinjosa grant, sd 2844 ft. J. W. Pippin's N. Hinnant 1, blk 11, sur 147, Randado sur, dk.

KARNES COUNTY—Fort Bend Oil Co.'s Newberry 1, reset screen after deepening to 3050 ft. J. Morrisey, Cochran 1, sd 1012 ft.

KERR COUNTY — Evans and Gant's Jeff Love 1 (discovery) resume pumping after dr out lead and wool plug at total depth of 3391 ft; Seiker and Mears 1, sw corner sec 1805, Love district, dr around 425 ft; Estle Young 1, nw corner sec 28, northeast of Love well, dr water well.

KENDALL COUNTY—Hardy Sitton's W. B. Garvin 1, D. L. Richardson sur No. 7, 1 mile ne Kendalia, prep to re-dr 1165 ft.

KINNEY COUNTY — Magnolia's Wardlow 1, dr 5107 ft.

LA SALLE COUNTY — Fred. W. Volz's Coleman 1, blk 15, sur 514, still sd 40 ft.

LIVE OAK COUNTY—Phillips Pet. Co.'s W. W. Goebel 1, 1400 ft from w line of sur and 1320 ft n Mineral-Oakville highway on Refugio school lands, 3 miles ne Oakville, Houston Oil Co.'s Boothe 1-A, 3600 ft ne Mt. Lucas gas field in M. B. Kivline sur, flowed 63 bbls first day, but settled down to 27 bbls daily by aid of gas lift at 5270-77 ft; Cartwright 22, 1500 ft e Mt. Lucas field in M. B. Kivlin sur, abn, total depth 6023 ft, plugged back to 1609 ft to test gas sand, but could not complete; Brown Cattle and Land Co. 3, nw cor. M. B. Kivlin sur, dr 4770 ft hard shale; Brown Cattle and Land Co. 6, sw cor M. B. Kvlin sur, dr 3822 ft in shale and lime. Pickett, Buzzini and Jacob's Kay 1, Bridget Faddin sur. 5 miles from George West, re-dr 3501 ft.

MAVERICK COUNTY—Texas Gas Utilities Co.'s Sullivan 5, blk 7, center sec 82, dr abt 7460 ft; Chittim 7, blk 7, I&GN sur, no rept.

McMULLEN COUNTY — Brodie, Shearer and Emerich's Shiner 1, 12 miles se Tilden, dr 520 ft.

NUECES COUNTY—Grimm and Yakey's Bauer 1, 15 miles w Corpus Christi and just n Robstown, sd 4340 ft. Moody-Seagraves Producing Co.'s Sedwick 1, abt 1200 ft n Houston-Hunter producer, 1050 ft from s line and 160 ft from e line of lease, lcn; Smith 1, 2500 ft s of Houston-Hunter well, producing 40,000,000 cubic ft gas and 60 bbls oil with 1600 lbs. pressure at 4060-82 ft. Best et al's Boorey 1, 2½ miles nw Saxet field, spudded. Houston Oil Co.'s Olie Pur 1-B, dr about 1000 ft. H. H. Weinert's Mohle 1, sec 94, just south of Driscoll, dr 3185 ft.

REAL COUNTY — Gant and Kilgore and Eastland Oil Co.'s Dan Auld 1, sec 23, 3 miles sw Love well, prep to spud. Evans and Sprinkle et al's Haby 1, sec 175, 7 miles sw Love test, dr 1012 ft; Marcus Auld 1, sec 15, blk D, HE&WT sur, setting 10-inch cas 1250 ft.

REFUGIO COUNTY — Houston Oil Co.'s Rooke 1-B, 2 miles sw Refugio, ¼ mile w production, sd 6194 ft, top sand 6186 ft, bailed little oil; Rooke 14 (wo) in old gas area, 3 miles w Refugio, sw offset to Smith-Rogers producer, test salt water 3748 ft, sd. Moody-Seagraves Producing Co.'s Heard 3-B, s of townsite, completed 175 bbls 3652-61 ft; Heyser 1-B, s of Refugio on tank farm site, 1 mile se production, cored oil and gas sand 6417 ft, odor of gas in sand shale 6330 ft, oil, water and gas in sand at 6384 ft, salt water sand 6410 ft, coring deeper; St. Johns 1-B (formerly T. P. Morgan) s of Refugio, dr 4616 ft. Morgan and Rutherford's Rogers Heirs 1, ¼ mile n Smith-Rogers producer, 3 miles w Refugio, test sw 3684 ft, sd L. L. Smith's Rogers Heirs 2, 3 miles w Refugio in old gas area, offset to Rogers 1, sd 5110 ft.

SAN PATRICIO COUNTY — Cosden Oil Co.'s Ramsey 1, sd 4118 ft. LaFeria O&G Co.'s Smith 1, sd 4190 ft. Peterman et al's Crow 1, sd 4100 ft.

STARR COUNTY — Kush and Duerkson's Kelsey Bass 1, blk 9, subdivision of Porcion 75, 76, 77, Jurisdiction of Carmargo, dr 856 ft. Los Olmas Oil Co.'s Kelsey-Baas 2, blk 6, subdivision of Porcion 75, 76, 77, Jurisdiction of Carmargo, sd 269 ft. Sacramento O&G Co.'s Seabury et al 1, 8-inch csg set top of sand at 349 ft, now sd.

UVALDE COUNTY — Phantom Oil Co.'s DL&C sur, 150 ft from n and 450 ft from e line.

WARD COUNTY—Alpine Oil & Dev. Co., Alpine, J. H. Boogher, 30, 3, S 11, B 5, H&TC sur, 2026 ft from sw and 1874 ft from se line.

WILBARGER COUNTY—Bauman Drilling Co., Vernon, W. H. Johnson, 80, 1, S 11, B 10, H&TC sur, sw corner.

WHEELER COUNTY—Remo Oil Co., Pampa, T. J. Spain, 160, 1, S 52, B 24, H&GN sur, 330 ft from n and w lines of ne¼. Jno. McCullough, Oklahoma City, Brown, 640, 1, S 37, B N1, H&GN sur, 500 ft from n and 600 ft from e line.

WILLIAMSON COUNTY—J. R. Collins & Co., Corsicana, M. V. Lawrence, 27, 6, S. Miller sur, 150 ft from w and 215 ft from s line.

YOUNG COUNTY—R. N. Hamilton, Wichita Falls, G. C. Rochell, 100, 2, W. R. Peveler sur, 1600 ft from n and 450 ft from w line. Nix & Dale, Wichita Falls, J. B. Daniels, 3, No. 411 sur, 450 ft from s and w lines. Seitz, Comegys & Seitz, Wichita Falls, W. T. Finch, 40, 3, 40, TE&L sur, 150 ft from n and 750 ft from e line. F. H. E. Oil Co. & Kimbell & Anderson, Fort Worth, N. R. Finch, 40, C6. 39, TE&L sur, 300 ft w of 5. Victor Swanson, Olney, M. Ligon, 120, 1, 1998, TE&L sur, 450 ft from n and w lines. J. F. Larimore, 40, 1, 2245, TE&L sur, 450 ft from s and w lines. W. T. Brazleton et al, Olney, B. B. Teague, 60, 1, 1464, TE&L sur, 1511 ft from w and 1134 ft from s line sec. Christie Bros., Wichita Falls, J. H. McLaren, 62, 1B, B 4, J. Conner sur, 200 ft from n and 500 ft from w line. Wooten & Reed, Graham, M. E. McBrayer, 40, 6, 1907, TE&L sur, 1490 ft from w and 1669 ft from s line sec. McMeans & Shasta Oil Co., Wichita Falls, H. A. Sparks, 40, 1, 637, TE&L sur, 150 ft from s and e lines. W. N. Vandervert, Fort Worth, E. Herring, 55, 2, 182, TE&L sur, 1500 ft from w and 450 ft from s line. Putnam Oil Co. & Panhandle Refg. Co., Wichita Falls, E. C. Keith, 80, 1, 267, TE&L sur, 933 ft from n and w lines. W. F. Hamilton, Wichita Falls, N. C. Finch, 40, 8, 40, TE&L sur, 768 ft from e and 150 ft from s line n½ sw¼. Deep Oil Dev. Co., Wichita Falls, A. Furr, 40, 1, 90, TE&L sur, 150 ft from n and e lines.

ABBREVIATIONS

NOTE—The following is the explanation of abbreviations, signs, etc., used in completion and wildcat reports: *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million feet of gas; abn—abandoned; bbls—barrels; b.s.—basic sediment; cas—casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in.—inches; lcn—location; m—milling; n, s, e, w—north, south, east, west; r—reaming; sd—shut down; sdtr—sidetracking; sp—spudding; sr—straight-reaming; std—standardizing; sw—salt water; td—total depth; ur—underreaming; wo—workover; wosr—waiting on standard rig.

Claudt 1, sd 2710 ft. Waldrup and Welsh's Benson 1, sd 1620 ft.

WEBB COUNTY—Cole Pet. Co.'s Benavides 3, sur 1613, dr 745 ft. O. W. Killam's Johnson 1, sur 1617, dk; Cuellar 3, Share 4, Cuellar Grant, dr 2022 ft; Bruni 1, sur 77, dr 3212 ft. Geo. S. Marshall's G. W. Webster 3, sur 684, plugged back to 3078 ft.

ZAPATA COUNTY—O. W. Killam's Slator 3, blk 78, dr 2560 ft; Mackenzie and Talmadge's Trevino 1, blk 6, sur 4, dr 570 ft; Wm. Marks' Flores 1, blk 36, Marks Subdivision Porcion 37, dr 2060 ft; Neilson and Coursey's Luther et al 1, blk 11, sec 5, Fullerton sub, Share 8, Borrego Grant, dr 125 ft. National Oil Co. of Texas' Luther et al 1, blk 97, Da Pron sub, ne ½ Porcion 6, dr 80 ft. B. F. Nixon's Gutierrez 1, lot 5, blk 8, Partition 10, Borrego Grant, standing 37 ft. John J. O'Hern's S. Benavides 2, blk 19, Fansler & O'Hern sub of Carto Blanco Ranch, Villa Grant, dr 1650 ft after testing sw in sand at 1612-19 ft. Penny Prod. Co.'s Juan V. Cuellar, Jr. et al 1, blk 1, sur 2, Pappas sub of Porcion 33 and 34, standing 1929 ft. T. H. Ward's G. Uribe 1, blk 8, sub of Share 7, Partition 6, J. M. Borrego grant, rigged up, standing.

WEST TEXAS

Completions

PECOS COUNTY—
J. D. O'Mara et al, Bennett 1 .... * 1230

ANDREWS COUNTY—Deep Rock Oil Co. et al's Kuykendall 1, elev 3217 ft, top anhydrite 1678 ft, salt 1720-2810 ft, top lime 4045 ft, dr with 1850 ft 31.5 gravity oil in hole at 4245-4375 ft.

BREWSTER COUNTY—Trans-Pecos O&G Co.'s Jones 1, elev 3073 ft, sd 2760 ft.

COCHRAN COUNTY—Continental Oil Co.'s Slaughter 1-B, dr 2540 ft. Penn Oil Co. & Kiskadden's Slaughter 1, lcn.

COKE COUNTY — Reid-Hitchins & Stanolind O&G Co.'s Duncan 1, rig.

CONCHO COUNTY—W. C. Beesley et al's Sam Waring 1, sp and sd. A. W. Turner-Cromwell & Wesner's Brosig 1, dr 1480 ft.

CRANE COUNTY—Cranfill Bros. Oil Co. et al's J. T. Muir 1, elev 2499 ft, top salt 485 ft, top white lime 2330 ft, dr 4300 ft. Cranfill & Gulf Prod. Co.'s J. B. Tubb 1, elev 2526 ft, salt 505-1400 ft, top brown lime 1410 ft, top white lime 2455 ft, dr lime 4795 ft and flowing 130 bbls fluid, 60 per cent water daily. C. C. Duffey & Gulf's Cowden 1, sp.

CROCKETT COUNTY — Taylor-Link Oil Co.'s Bullock 1, top salt 1090 ft, co 2300 ft.

CULBERSON COUNTY—Cranfill Bros. Oil Co. et al's Seay 1, sd 460 ft. W. L. Kornrumpf et al's W. D. Garren 1, sd 1225 ft.

DAWSON COUNTY—R. A. Albaugh et al's Robinson 1, spd and sd.

ECTOR COUNTY—Galt-Brown Co. & Penn O-I Co. Unit Plan's Cowden 1, sd 180 ft. Southern Crude Oil Pur. Co.'s Cowden 2, elev 3065 ft, top anhydrite 1782 ft, top salt 1872 ft, dr 3505 ft. H. F. Wurtz et al's Ibbetson 1, elev 2840 ft, top salt 865 ft, sd 3280 ft.

EDWARDS COUNTY — Phillips Pet. Co.'s Holman 2, dr 7603 ft.

EL PASO COUNTY — Tri-State Oil Co.'s Louis Bobadella 1, driving 18-inch cas 185 ft.

FISHER COUNTY — Condor Pet. Co. & Humble O&R Co.'s Wilson 1, elev 1879 ft, top lime 3181 ft, swab 250 bbls 10 hrs at 3188-3194 ft. Roeser-Pendleton, Inc. & Amerada's Gribble 1, dr 1270 ft; Littleton 1, dr 2945 ft.

GARZA COUNTY—Penny & Porsey's Justice 1, dk.

GAINES COUNTY—Texas Consolidated Oil Co. & T. P. Coal & Oil Co.'s E. H. Jones 1, elev 3636 ft, ur 1335 ft.

TOM GREEN COUNTY—Cromwell et al's Norsworthy 1, sd 765 ft. Pratt & Hancock's Lewis 2, sd 200 ft.

HUDSPETH COUNTY—R. G. Patillo & Ed. Welch's K. S. Briggs 1, materials.

IRION COUNTY—Chas. Denny & W. R. Andrews' Tankersley 1, ur 1320 ft. Stanolind O&G Co.'s W. H. Williams 1, elev 2544 ft, dr 1175 ft. Straughn et al's Tankersley 1, elev 2306 ft, ur 1473 ft.

JONES COUNTY—Bonds-Trout-C. C. Julian & Gulf Prod. Co.'s M. J. Williams 1, dr 2335 ft. J. B. Jameson et al's King 1, dr by tools 1550 ft. J. L. Hart et al's Roberts 1, sd 1000 ft. Shaheen Oil Co.'s J. T. Chittum 1, machine. Shaheen & Union Oil Co.'s King 1, dr 1740 ft. Sam Yingling et al's J. A. Williams 1, dr 215 ft.

LOVING COUNTY—The California Co.'s J. G. Allen 2, cem 10¾ cas 715 ft; Allen 3 and 4, rigs; Reagan-McIlvain 7, salt 780-4095 ft, cem 7-inch cas 4128 ft, td 4135 ft. Carl Cromwell & Atlantic Oil Prod. Co.'s Russell 1, salt 750 to 4025 ft, cem cas 4052 ft, td 4092 ft. Folbre & Evans' D. P. Dean 1, rig. Grisham-Hunter Corp.'s Dean 1, sd. Henshaw et al's Reagan 2, rig. Pete Hoffman et al's Ramsey 1, rig; Ramsey 2, lcn. Lewis & Slagel Drlg. Co.'s Cartwright-Henderson 1, elev 2901 ft, top salt 585 ft, dr 1995 ft. C. H. Lockhart et al's Hubbard 1, top salt 715 ft, dr 1710 ft. Lockhart & Co.'s Allen 4, salt 724 to 3985 ft, dr 4060 ft. H. W. Martin et al's Wheat-Russell 1, elev 2679 ft, top salt 750 ft, dr 2475 ft. Miller-Burge & Healy's Chapman 1, top salt 750 ft, top Delaware 4285 ft, flowing 30 bbls oil daily, dr 4380 ft. Rush-Anderson & Moor's Wheat 1, lcn. F. S. Tennant et al's Roy Martin 1, rig. West Texas Pet. Corp.'s J. G. Allen 2, dr 580 ft; Salisbury 1, rig.

MENARD COUNTY—L. G. Priest et al's Sorrell 1, elev 2279 ft, fsh ur 2695 ft.

PECOS COUNTY—J. R. Bell et al's Eaton-Sun 1, top salt 910 ft, flow heads oil and sd 1603-09 ft. Charlesworth-Messenger Oil Co.'s Butz 1, elev 2519 ft, sd making gas 1282-90 ft. E. L. Chapman et al's Streety 1, elev 2563 ft, sd 2210 ft. C. L. Dittman Oil Co.'s Eaton 2, lcn; Jackson 1, dr 215 ft. Humble O&R Co.'s H. L. Kokernot 1, elev 3593 ft, top salt 2713 ft, cem whipstock 5150 ft, td 6170 ft. Magnolia Pet. Co.'s Eaton 1, dr 685 ft. B. C. Mann et al's Scharff-Blackman 1, sd hfw 2098 ft. McCarty Oil Co.'s Gray 3, sd 1437 ft. J. R. Miller et al's Bennett 1, sd hfw 2105 ft. Penn Oil Co. et al's J. B. Alvis 1, elev 3493 ft, top Rustler lime 1385 ft, dr 1655 ft. O. J. Perren et al's Eaton 2, elev 2437 ft, dr by tools 1765 ft. Pure Oil Co.'s Harrison 1, elev 3495 ft, top Delaware 4265 ft, sd 5000 ft. Riser & White's Riser 1, sd 500 ft. Eric Schelling & Slaughter's Yates 1, sd 340 ft. Southern Crude Oil Pur. Co.'s Scharff-Blackman 1, top salt 865 ft, dr 2535 ft. Williams & Moran's Heinter-State 1, elev 2528 ft, sd 1750 ft. Tex-Mex Pet. Corp. (was L. B. Lancaster's) Eaton-Pure 1, dr 725 ft.

REEVES COUNTY — The California Co.'s Kloh 2, cas froze 1127 ft.

RUNNELS COUNTY—Chas. Dutton et al's G. W. Dean 1, sd 2315 ft.

SCHLEICHER COUNTY—Eastland Oil Co. Unit Plan's Tisdale 1, dr 950 ft. Munger-Wilson Oil Co.'s Page 1, elev 2270 ft, sd 5053 ft. Paul Teas & Walter Gant's Allison 1, elev 2311 ft, sd 4780 ft. J. D. Wesner et al's Ratcliff 1, elev 2408 ft, fsh 1060 ft.

SCURRY COUNTY — R. B. Pender O&G Co.'s Davis 1, elev 2208 ft, top salt 445 ft, sd 5000 ft. Scurry County Oil Exchange's Earnest 1, lcn. Seifert & Dibble's Blackburn 1, top salt 720 ft, sd 2315 ft.

STERLING COUNTY—W. C. Beasley et al's W. L. Foster 1-A, sd 2111 ft.

TAYLOR COUNTY — Adams-Ferguson & Hobbs' Lowe 3, elev 1918 ft, dr 1835 ft. Geo. Goodrum et al's L. Ackers 1, lcn. J. B. Jameson et al's Webb 1, elev 1905 ft, co 6251 ft. Sanger et al's Abilene City fee 1, elev 1759 ft, dr 2710 ft.

TERRELL COUNTY—Big Bend Oil Corp. et al's Bassett 1, elev 2396 ft, sd 2670 ft. Mid-Kansas O&G Co.'s Goode 1, elev 2405 ft, dr 5550 ft.

VAL VERDE COUNTY—O. O. Owens et al's Mills 1, elev 2130 ft, cem 2 strings tools in hole, td 6780 ft.

UPTON COUNTY—Bennett Oil Co. & P. H. Williams' Shirk 1-A, rig. C. F. Corzelius et al's Shirk-Tidal 1, top salt 1015 ft, swab 48 bbls oil 12 hrs 2654-2728 ft. Gulf Prod. Co.'s McElroy 91, dr 550 ft. G. E. Farley et al's John Lane 1, lcn. Penn Oil Co. & Shell Pet. Corp.'s Halamacek 1, elev 2806 ft, top anhydrite 1535 ft, top salt 1568 ft, fsh 4250 ft. TP Coal & Oil Co.'s King 1, top salt 1150 ft, top lime 2630 ft, sd with 100 ft oil in hole at 2785-2815 ft.

WARD COUNTY—A. Bradford et al's B.

COMPLETIONS

(*Continued from page 76*)

PANHANDLE DISTRICT

Company, Well and Location	Initial Production Bbls.	Depth
CARSON COUNTY—		
Krebs & Barnard, C. C. Barnard 1	¶3-50	3180
GRAY COUNTY—		
Adams & McGahay, Morse 5	125	2675
Mazda Oil Corp. et al, Coombs-Worley 1	¶9-2470	2958
Smith et al, Morse 1	¶1½	2892
HUTCHINSON COUNTY—		
Magnolia Pet. Co., Herring 1	¶4	2904

NORTH TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
ARCHER COUNTY—		
John Brownlee et al, Threet 1	*	1206
Moran-Heydrick & Fischer, Hasson 1	*	980
Seaberry & Burdin, Davis 1	*	1403
GRAYSON COUNTY—		
F-H-E Oil Co., Utiger 1	*	969
Guy Tucker et al, Handy Bank 1	*	1435
WICHITA COUNTY—		
R. R. Clark et al, Bickley 9	50	864
Bickley 12	50	865
Geo. J. Proctor et al, Honaker 3	35	850
Honaker 4	50	840
Schlaffke & Blair Honaker 3	40	841
Walton & Blair, Honaker 5	25	856
WILBARGER COUNTY—		
The Texas Co., Waggoner 392	*	1073
NORTH YOUNG COUNTY—		
Arp & McClanahan, Sanders 1	*	613
Brazelton Bros. et al, Teague 1	*	915
F-H-E Oil Co., Finch 5-C	400	674
Finch 6-C	300	675
Glover & Wall, Johnson 8	*	525
W. F. Hamilton et al, Finch 7	30	671
Finch 8	*	730
Hamilton & Helm, Russell 2	*	510
King Royalty Co. & Bullington, Graham 12	250	724
Geo. Mollenkoph et al, Remington 1	*	720
Seitz-Comegys-Seitz, Finch 3-B	*	737
Wooten & Reed, McBrayer 6	*	660
Young Bros. & Terrell, Larimore 5	10	680
SOUTH YOUNG COUNTY—		
Long et al, Lisle 1	*	2815

CENTRAL WEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
BROWN COUNTY—		
Beasley et al, Dabney 1	*	1825
Ralph Lockwood et al, Boysen 1	2	435
COLEMAN COUNTY—		
Agnew & Sons et al, Switzer 5	75	1437
Paul H. Davis et al, Overall 2	¶1	939
Eastland Oil Co. et al, Cannon 1	*	1617
Guffey Bros. et al, Lovelady 1	*	800
The Texas Co., Edmondson 1	200	1628
EASTLAND COUNTY—		
Hickory O&G Co., Fee 1	90	3543
PALO PINTO COUNTY—		
McLester Oil Co., Wilbur 3	¶1¼	1687
STEPHENS COUNTY—		
Hanlon Gasoline Co., Milan 3	*	4111
Hickok Prod. & Dev. Co., Hamil 4	*	4166
Lone Star Gas Co. McKelvain (dd) 1	*	3890
Urban et al, Riddle 6	¶11	1974

WEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
FISHER COUNTY—		
The Texas Co., Stephens 2-A	35	3261
PECOS COUNTY—		
J. R. Bell & Humble O&R Co., Scharff-Blackman 1	5	1624
C. L. Dittman Oil Co., Eaton (Sec. 37) 1	10	1634
REAGAN COUNTY—		
Big Lake Oil Co., University 179	*	4003
UPTON COUNTY—		
Humble O&R Co., Ricker 15	135	2229

CENTRAL EAST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
RUSK COUNTY—		
W. B. Hamilton-Consolidated Oil Co. et al, Camp 1	2600	3643
Bert J. Shaw Oil Co. & Imperator Oil Corp. Ashby 1	2000	3638
VAN ZANDT COUNTY—		
Pure Oil Co., N. R. Blake 1	575	2964
A. D. Clark (2-ac) 8	5000	2949
D. O. Mayo (29½-ac) 2	2000	2918
G. C. Stewart (50-ac) 3	3300	2949
R. L. Wells-A. G. Tunnell 2	5000	2956
The Texas Co., R. A. Tunnell 5	2500	2928

Carson 1, machine. California Co. & Atlantic Oil Prod. Co.'s Allen 1, top salt 2296 ft, top lime 2344 ft, co after misplaced shot, td 2710 ft; A. B. Gordon 1 ,rig. Empire Gas & Fuel Co.'s Sealy 1, elev 2654 ft, top salt 1175 ft, top lime 2320 ft, dr by tools in oil and gas pay 2582-2610 ft. Gulf Prod. Co.'s Hutchings 7, rig; O'Brien 16, top salt 1195 ft, dr 2400 ft. J. G. Kugle et al's Chas. Wallis 1, top salt 1835 ft, swab and flowed 85 bbls 6 hrs Feb. 6, at 2448-56 ft. Magnolia Pet. Co.'s Atlantic-Sealy 1, dr 915 ft. R. F. Owen et al's Johnson 1, elev 2499 ft, top salt 1600 ft, dr 2005 ft. Prairie O&G Co.'s Hill 1, top salt 975 ft, dr 1260 ft. Rickford & Smith's Johnson 1, elev 2441 ft, top salt 798 ft, dr 2115 ft. Paul Ryan et al's Allen 1, dr 810 ft. Shipley Oil Corp.'s Hayzlett 5, top salt 725 ft, dr 765 ft; Monroe 1-A, elev 2655 ft, top salt 2485 ft, fsh 3780 ft.

WINKLER COUNTY—Magnolia Pet. Co.'s Bashara 1, elev 2884 ft, top anhydrite 829 ft, top salt 996 ft, top lime 2317 ft, dr 2810 ft; J. B. Walton 1, elev 2931 ft, top salt 1165 ft, dr 2065 ft.

EAST TEXAS

HARRISON COUNTY — Hunter et al's Daugherty 1, W. B. Burris sur, 12½ cas 245 ft, dr 1350 ft. Karona Pet. Co.'s A. J. Bohler 1, S. F. Sparks sur, dk. O. H. Parkening's Hall-Covin 1, Walter H. Payne sur, materials. Rowan & Nichols' Henry Pitts 1, E. A. Merchant sur, lcn.

MARION COUNTY—Trammell et al's Hussey 1, Chas. Lockhart sur, elev 282 ft, top chalk 1771 ft, claim oil show in hd chalk near bot hole, cemtd 8¼-inch cas 1514 ft, trying to go over broken ds with 6-inch cas, td 1878 ft. Rondeau & Hindman's McGaugherty 1, W. J. Wills sur, sp dr 20 ft. Hindman et al's Lindsey 1, Alex Albright sur, sp 10-inch 40 ft.

PANOLA COUNTY—Knott et al's Marion Durham 1, Chas. Haley sur, 6⅝ cas 2670 ft, 5 3/16-inch cas 2977 ft, tested est 50,000 cu ft gas with sw 2988 ft, dr 3008 ft. Smith et al's Hunt 1, Albert Johnson sur, dk. Creighton & Hart's Kyle 1, J. Tippett sur, elev 349 ft, top chalk 1444 ft, top Blossom 2216 ft, blew out making mud, gas and sw, sd 3704 ft. Bell et al's Burnett Lbr. Co. 1, S. B. Hendrick sur, elev 186 ft, 8⅛ cas 2027 ft, sd in sand 3086 ft. Warren & Dawes' McNeese 1, A. Booker sur, dk. Dillon & Bradham's Baldwin 1, Hampton West sur, 12½ cas 43 ft, dr shale and bldrs 1840 ft. United Prod. Corp.'s Steele 17, B. C. Jordan sur, lcn (Trinity test). Neff et al's Brumble 6, B. C. Jordan sur, dk (Trinity test). Natural Gas Prod. Co.'s H. H. Alvord 1, B. C. Jordan sur, 10-inch cas 1160 ft, cemtd 6⅝ cas 4381 ft, td 4400 ft. Daisy O&G Co.'s Rucks Hrs. 1, Jno. Palmer sur, 12½ cas 180 ft, top chalk 1352 ft, dr 1750 ft.

SABINE COUNTY—Loring Oil Co.'s Nona Mills Lbr. Co. 1, Jas. Mason sur, ta 4803 ft.

SHELBY COUNTY — Chapparal Oil Co.'s Holt 2, Matthew Moore sur, sd wo rotary 3111 ft.

CENTRAL EAST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
LIMESTONE COUNTY—		
Ben Segal & Earnest Hundahl, A. E. Smith 1	*	3050
RUSK COUNTY—		
Burgoyne Bros. et al, J. A. Alexander 1	*	3757
J. K. Lewis & Goodman, O. C. Jones 1	*	3707

BOWIE COUNTY — Maud Redwater Oil Co.'s Merritt 1, Y. S. McKinney sur, sd 635 ft. Lee Timberlake et al's Tidwell 2, L. M. Rice sur, elev 290 ft, sd 720 ft.

CASS COUNTY — C. E. Murdock et al's Coody 1, Evans Watson sur, lcn. Olds-Smith et al's Joe Athenay 1, J. C. Byers sur, sd 1005 ft. John C. Rogers et al's W. Q. Henderson 1, Wm. Davis sur, dr 590 ft; Lanier 1, K. A. Welborn sur, elev 366 ft, sd 2275 ft. Smitherman et al's Fell 1, Farrell sur, dk. Morse et al's Henderson 1, dk abn.

CHEROKEE COUNTY—Arcadia Ref. Co. et al's Jones 1, Edson Gee sur, elev 481 ft, top Pecan chalk 2978 or 2994 to 3370 ft, top Austin chalk 3848 ft, dr 3880 ft. Roy G. Baker et al's M. M. Tomme (40-ac) 1, Wm. George sur, dr 1800 ft. D. Harold Byrd et al's Farriss 1, elev 215 ft, dr 2050 ft. McDonald Bros. et al's W. A. Newton 1, Thos. Quevedo sur, rig.

DELTA COUNTY—Delta Dev. Co.'s Hays et al 2, sd. Everetts Drlg. Co. et al's M. Sansing (40-ac) 1, J. B. Craig sur, sd 2130 ft. D. S. Hoad et al's J. J. Baker 1, T. P. Eddin sur, sd 1550 ft. Worthington & Stedham's W. H. Dejernett 1, E. Chick sur, show oil and gas 1578-85 ft.

ELLIS COUNTY — Foster & Richardson's Moise-Cerf 1, sd 2187 ft. E. M. Rogers et al's J. L. Winn 1, O. Wheeler sur, sd 1360 ft.

FRANKLIN COUNTY — Harper-Byers Oil Co.'s A. J. Laws 1, D. G. Rogers sur, sd 2150 ft.

GREGG COUNTY — Bell-Graddy et al's Daniels-M. George 1, Mary Van Winkle sur, rig. D. Harold Byrd-Gulf-Humble-Republic's Cammorras Bros. 1, Haden Edwards sur, rig; Frank Elder 1 ,Wm. J. McCurry sur, cem cas. W. L. Brandon et al's J. F. Richards 1, Mary Van Winkle sur, dr 1855 ft. E. E. Eslick et al's Spring Hill Church (15-ac) 1, Dolores Sanchez sur, rig; J. Castleberry 1, Wm. Robinson sur, dk. Frank Foster et al's Fisher-Rodden 1, John Ruddle sur, rig. Mrs. Mamie Hammonds-Clark et al's J. M. Hamby 1, John Lout sur, elev 376 ft, top Saratoga chalk 2361 ft, top Pecan 2508 to 2886 or 2902 ft, dr 3330 ft. Roeser-Pendleton, Inc. et al's Rodden 1, Wm. Robinson sur, dk. C. Rosenfield et al's Knowles 1, Wm. Lyles sur, dk.

HENDERSON COUNTY—H. B. Ashburn et al's T. E. Terry 1, Arron York sur, elev 397 ft, Pecan chalk 2810-3015 ft, top Austin chalk 3983 ft, sd 3993 ft. E. L. Chapman et al's Cade Bros. 3, J. B. Dorsey sur, Pecan chalk 3073-3267 ft, top Austin chalk 4385 ft, dr 4520 ft.

LAMAR COUNTY—K. O. Bundy-Everett & Allen's G. S. Legate 1, J. V. Cheney sur, dr 1410 ft.

LEON COUNTY—Sun Oil Co.'s Ella Grayson 1, Marquette Blk., dr 885 ft.

LIMESTONE COUNTY—R. H. Dearing & Sons' B. B. Barron 1, E. Mabry sur, dr 2100 ft. Geo. B. McCamey et al's Kosse Townsite 1-A, sd 1515 ft. E. E. O'Byrne & E. L. Chapman's S. W. Hancock 1, H. York sur, sd 1165 ft. Segal & Hundahl's Smith 1, dry and abn 3050 ft. A. M. Yost et al's S. J. Fenner 1, H. C. Hoskins sur, dr 3665 ft.

NAVARRO COUNTY—L. G. Priest et al's H. Albritton 1, Bazette area, Austin chalk 2276 to 2734 ft, dr 3026 ft.

RED RIVER COUNTY—D. M. Buffington et al's L. H. Moore 1, D. Cornelius sur, Annona chalk 3 to 241 ft, red beds 1383-1453 ft, sd 1620 ft. E. L. Chapman et al's Morris-Guest 1, S. Larkin sur, fsh 1505 ft. Droppleman & Bundy's J. W. Cunningham 1, S. V. Chi sur, dr 2470 ft. Echols & Peters' E. Howison 1, W. Humphries sur, dk. Everett & Allen's W. F. Bryan 1, P. Vaughan sur, lcn. Johnson Pet. Co.'s Style 1, Dean sur, sd 2225 ft.

ROCKWALL COUNTY—A. W. Walker & Son et al's M. S. Jones 1, S. Simmons sur, dr 420 ft; Paul Snow 1, J. E. Sherwood sur, dr 553 ft.

RUSK COUNTY—Joe Burnham-Lloyd Oil Corp. & Andy Anderson's Nicely 1, Thomas Obar sur, dr 2350 ft. Capps-Smith & Roy Cameron & Andy Anderson's J. L. Cochran 1, J. Routh sur, elev 386 ft, top Pecan chalk 2680 ft, sd to cure titles 2713 ft. Knox et al's Melton 1, dk. Moss et al's Hamp Matthews 1, elev 387 ft, co 2338 ft. Pearl Oil Co. (Vitek's) Eaton 1, F. Cordova sur, rig. Nat Sadler et al's Ed. Sparks 1, Abner Nail sur, sp and sd.

SMITH COUNTY—Guy Lewis et al's Cook-Green (82-ac) 1, Jas. Jordan sur, east of Arp, rig. T. B. Slick & J. G. Kugle, Jr., et al's M. Freeman 1, A. J. Lagrone sur, elev 498 ft, Pecan chalk 2080-3275 ft, co in Austin chalk 3623 ft.

UPSHUR COUNTY — McGinley Corp.'s Reeves-Truitt 1, L. B. Brown sur, elev 358 ft, top Navarro 1680 ft, sd 2043 ft.

VAN ZANDT COUNTY—J. C. Fore & Geo. L. Pace's P. S. Hand 1, Wm. Sherman sur, elev 564 ft, Pecan chalk 2420-2444 ft, Austin chalk 3452-3893 ft, dr 5155 ft. Kelly O&G Co.'s Lunsford 1, J. Conner sur, sd 2300 ft. Neil McElroy et al's R. W. Murphy 1, H. Bailey sur, sp and sd. Texas Chief Oil & Roy. Corp.'s Foster 2, F. Montgomery sur, materials. Van Oil Assn's J. C. Tankersley 1, L. Landers sur, sd 2000 ft. Wilson et al's Stribbling 1, Phillip Mason sur, sd 1585 ft. Wittmer O&G Properties et al's R. W. Beggs 1, H. W. Raquet sur, elev 560 ft, top Pecan chalk 2605 ft, dr 2650 ft.

VAN FIELD—Helms et al's C. E. Bogue 1, Marshall University sur, elev 461 ft, sd 2843 ft. Humble O&R Co.'s Blake 9, sp. Pure Oil Co.'s C. H. Cannon 4, top Austin chalk 2427 ft, completing 2944 ft; Davis 1, dk; I. D. Miller 2, top Pecan chalk 1575 ft, dr 2616 ft; L. A. Smith 2, completing 2928 ft; F. B. Smith 3, dr 2856 ft; W. F. Swain (20-ac) 4, dk; O. L. Swain (80-ac) 3, top Pecan chalk 1675 ft, coring 2860 ft; R. L. Wells 5, dk. Sun Oil Co.'s T. J. Wallace 2, rig.

TEXAS GULF COAST

AUSTIN COUNTY — Arkansas Nat. Gas Co.'s Machemehl 1, 2½ mi n Belleville, abn 5005 ft. O'Hara et al's Schrader 1, sd 3480 ft. Empire's Kunze 1, San Felipe, dr 5850 ft lime.

BRAZORIA COUNTY—Thos. Faust et al's Fee 6, 2 mi s Nash Dome, dr 6150 ft shale. Steele & Strickland's Lochridge 1, Lochridge, sd 50 ft. Rycade & Amerada's Seaburn 2, dr 6300 ft shale. Freeport Sulphur Co.'s Fee 2001, dr 5060 ft shale. The Texas Co.'s Ewing 1, Manvel, sdtr 7180 ft. Layne et al's Wisdom 7-A, Damon Mound, dr 3310 ft sand. Mills Bennett's Randon 2, Allen, dr 4160 ft lime; Reese 2, Allen, dr 3530 ft shale; Allen 3, dr 1620 ft shale. United Oil Synd.'s Speer 1, 3 mi n Danbury, sd 710 ft.

BURLESON COUNTY — Mid South Oil Co.'s Duckworth 1, 2 mi e Clay Station, dr 2580 ft shale.

CALHOUN COUNTY — The Texas Co.'s Smith 1, Chocolate Creek, ru.

CHAMBERS COUNTY—Pure's Lost Lake 5, Lost Lake, dr 6660 ft anhydrite. Shell's Herff 2, Moss Bluff, dr 6690 ft shale. Chicago Oil Corp.'s Lawrence 1, 10 mi s Barbers Hill, abn 5020 ft.

FORT BEND COUNTY—Gulf's Dabis 61, Big Creek, dr 4150 ft lime. Long Point Oil Co.'s Fee 1, Long Point, sd 620 ft.

GRIMES COUNTY—Wainwright-West Oils & R. H. Deering and Sons' Templeman 1, 6 mi s Navasota, dr 3740 ft sand.

HARDIN COUNTY—D. O. Speight's Gidrey 1, 4 mi s Batson, sd 3010 ft. The Texas Co.'s Gee 307, Sour Lake, prep to make ds test.

HARRIS COUNTY—Humble's Minnetex 4, Mykawa, dr 5700 ft shale and sand; Minnetex 5, lcn; Gehring 1, Mykawa, bailing 4870 ft. Cypress Oil & Dev. Co.'s Kitzman 2, 2 mi n Cypress, ta 4430 ft. Gulf States Oil Co.'s Augspurger 1, 8 mi n Court House, dr 3970 ft shale and lime. Midway Oil & Royalty Co.'s Warren 1, Hockley, abn 480 ft. Gulf's Manchester 2, Pierce Junction, slight oil show 4370 ft. Mike Kouri & Grayburg Oil Co.'s Bender 1, Pierce Junction, fsh 4020 ft.

JACKSON COUNTY — Warner-Quinlan's Hungerford 1, 1½ mi s Edna, sd 3180 ft.

JEFFERSON COUNTY — The Texas Co.'s Pipkin 4, Big Hill, dr 3590 ft rock. Humble's McFaddin 1, 8½ mi e Big Hill, dr 3630 ft sand. Keith et al's Reed-Hankamer 1, 3 mi ne Westbury, dr 2970 ft shale.

LAVACA COUNTY — Cranfill-Reynolds' Hermes 1, dr 2820 ft shale. J. Kendrick et al's Reeves 1, Heuser sur, sdtr 3000 ft.

LIBERTY COUNTY—Hamm et al's Harvard 1, Davis Hill, sd 1010 ft. J. R. Ingram's Hornbeck 1, 2 mi s Cleveland, dr 3000 ft sand. Harrison Oil Co.'s Quintette 4, North Dayton, dr 5320 ft shale. Gulf's Ezzell 1, Hankamer, abn 7095 ft. Tucker et al's Bell 1, Devers, sd 560 ft. Gulf's McFadden 3, Moss Bluff, dr 4940 ft shale. Humble's Sterling 7, Moss Bluff, dr 3370 ft shale and lime; Sergent 2, lcn; Breeden 2, Moss Bluff, ru. Texas Gulf Sulphur Co.'s Carter 1, Moss Bluff, abn 1812 ft.

MATAGORDA COUNTY—Empire's Booker 1, Citrus Grove, sdtr 5595 ft. Cockburn Oil Corp.'s Hawkins 2, Shepherds Mott, dr 4070 ft shale and lime.

MONTGOMERY COUNTY—Lake Creek Oil Co.'s Hunt 1, s Conroe, sd 670 ft.

ORANGE COUNTY—Crews Oil Co.'s Mansfield 1, set 6⅝-inch casing 690 ft. Gulf's Miller-Vidor 1, 2 mi n Vidor, dr 4300 ft gumbo.

SAN JACINTO COUNTY—E. P. Edwards et al's Bennett 1, dr 50 ft clay.

VICTORIA COUNTY—The Texas Co.'s McFaddin 2, Bloomington, dr 1015 ft gumbo.

WALKER COUNTY—Joyce Richardson et al's Smither 1, 12 mi n Huntsville, sd 3455 ft.

WASHINGTON COUNTY—Yegua Oil Co.'s Graves 1, 3 mi n Independence, dk. Penn-Tex Oil Co.'s Kansas 2, spudded and sd. Sun's Janner 4, Clay Creek, abn 5517 ft; Freeman 1, Clay Creek, abn 3640 ft.

WHARTON COUNTY — Shibe & Gray's Brown 1, 4 mi sw El Campo, sd 2800 ft.

LOUISIANA GULF COAST

ACADIA PARISH——Yount-Lee's Latrielle 9, Evangeline, stuck drill stem 8660 ft.

ASCENSION PARIHS—Gulf's United Land Co. 19, lcn.

CALCASIEU PARISH — Wilfred Lahay's Jardell 1, 2 mi ne Vinton, sd 3250 ft. Union Sulphur Co.'s Moss 2, Lockport, dr 1070 ft gumbo. J. O. Davis' Ind. Lbr. Co. 1, Starks, set 6⅝-inch casing 6560 ft. Gulf's Moore 26, Stark, set 6⅝-inch casing 1200 ft.

CAMERON PARISH — Magnolia's Sweet Lake Land Co. 2, dk. Pure's Yount-Lee 10, Sweet Lake, dr shale 6020 ft. Shell's Watkins 16, Black Bayou, dr 4060 ft shale; Black Bayou State 2, dr 3020 ft lime. The Texas Co.'s State Calcasieu Lake 7, lcn. Vacuum's Cameron Meadows 2, dk.

IBERIA PARISH—Jefferson Lake Oil Co.'s Lake Peigneur 10, Jefferson Island, sd 1700 ft; Lake Peigneur 11, lcn. The Texas Co.'s Vermilion Bay 6, rock 2040 ft.

IBERVILLE PARISH—Gulf's Gay 1, Bayou Choctau, sd 3410 ft. Standard's Wilbert 8, Bayou des Glaise, sd 4185 ft; L. Baist 1, Bayou Blue, ru; Case 2, Bayou des Glaise, lcn; Schwing 1-A, slight oil show 5360 ft; Schwing 3, salt water 2990 ft. Shell's Wilbert 5, White Castle, dr 5370 ft shale. Texas Gulf Sulphur Co.'s Wilbert 8, Bayou Choctau, lcn; Wilbert 9, lcn.

JEFFERSON PARISH—H. T. McClain et al's Atterbury 1, Welsh, dr 4170 ft sand.

LA FOURCHE PARISH—The Texas Co.'s Leesville 2, set 12½-inch casing 1130 ft.

PLAQUEMINES PARISH — Gulf's Burras Levee Board 2-B, Rose Dome, cavity 2210 ft. Humble's Cockrell-Moran 2, Lake Grande Ecaille, dr 4610 ft sand. The Texas Co.'s Garden Island Bay State 4, dr 5490 ft shale; Garden Island Bay 5, lcn.

ST. JAMES PARISH—Convent Oil Co.'s Jacobs 1, sdtr 1830 ft.

ST. LANDRY PARISH—Gulf's Haskins 4-A, Port Barre, dr 3690 ft sand. The Texas Co.'s Botney Bay Lbr. Co. 9, Port Barre, dr 65 ft sand.

ST. MARTIN PARISH—Harrison and Abercrombie's Barras 1-A, dr 5100 ft shale. The Texas Co.'s Iberville Ind. Co. 3, Hager Dome, dr 4820 ft sand; St. Martin Land Co. 5, dr 4230 ft salt. Rycade's Woodward 1, Bayou Bouillon, dr 5240 ft shale.

ST. TAMMANY PARISH—Washington and St. Tammany Drlg. Co.'s Coussack 2, dr 1950 ft shale.

TANGIPAHOE PARISH—Joan Dev. Co.'s Lake Superior Oil Co. 1, sd 3010 ft.

TERREBONNE PARISH—La. Gas & Fuel Co.'s Minor Estate 1, Houma, dr 4620 ft shale. The Texas Co.'s Bay Junop 2, Bay Junop Dome, sd 6870 ft; Bay St. Elaine 5, dr 1670 ft; Bay St. Elaine 1, dr 4190 ft shale; Lake Barre 8, sd 4080 ft.

VERMILION PARISH — Pure's La. Land Co. 1, dr 3140 ft sand.

NORTH LOUISIANA

Company, Well and Location	Initial Production Bbls.	Depth
CADDO PARISH—		
United Prod. Corp., Wall 1, 33-23-16	¶75	5506
Junior O&G Co., Breard 1, 9-18-16.	¶35	2778
DE SOTO PARISH—		
Standard Oil Co. of La., Farmer A-5, 32-14-13	*	2920
J. W. Clark, Tidwell 1, 22-13-14	*	3655
SABINE PARISH—		
W. M. Coates, Sabine 1, 1-7-12	*	2683
Frank Melat, Inc., Sabine 1, 6-7-11	*	2500
Sabine 2, 14-7-12	*	2550
WEBSTER PARISH—		
Gehrig Co., R. H. Miller 1, 16-18-10	*	3508

BIENVILLE PARISH—Cagle Bros.' Lawhon 1, 15-16-8w, cored gray sw sand 2581 ft, sr, td 2595 ft.

BOSSIER PARISH — Andrews & Davlin's Nattin 1, 15-22-14, arr make ds test, td 2100 ft. H. I. Morgan et al's Kendricks B-12, 22-19-11, 12½ cas 175 ft, cored sand 1840 ft, coring black shale 1865 ft. Rambaugh et al's Allison 1, 10-19-13, tested dry, sd 1100 ft. R. O. Roy's W. H. Hodges 1, 19-16-10, sp.

CADDO PARISH — United Prod. Corp.'s Wall 1, nw se 34-23-16, 7-inch cas 5160 ft, 18 ft sand, est 75 mil ft gas rock pressure 2330 ft, td 5506 ft (corrected). Emmons 1, ne sw 27-23-16, dk pat; Fortner 1, nwc frac sec 5-22-16, old well co to deepen, td 5020 ft. Junior O&G Co.'s Breard 1, 9-18-16, 6-inch 2740 ft, 10 ft sand 2768-78 ft, 35 mil ft gas 1100 pounds rock pressure, td 2778 ft. Libby et al's Foster 1, 29-15-16, sd 1600 ft. Ralph Davidson et al's F. Weiller 1, 33-17-13, sp dr 50 ft.

CATAHOULA PARISH—National Drilling Co.'s Marsh McMillian 1, 26-9-6e, 6⅝ cas 2796 ft, tested sw, sd 3086 ft.

CLAIBORNE PARISH—Baird Bros. et al's Whittaker 1, 30-20-7w, sd 2200 ft. Bough et al's Alexandria 1, 27-20-8w, sd 2200 ft. La. O. R. Corp.'s Langston 10, 19-21-7w, 9⅝ cas 2438 ft, dr hard sand and shale 3488 ft.

CALDWELL PARISH—Hudson et al's Burton 1, 36-12-2e, sd 2507 ft. Carter Bell et al's Taylor 1, 42-14-4e, lcn.

CONCORDIA PARISH—Ark. Fuel Oil Co.'s Alexander 1, 47-8-9e, 12½ cas 152 ft, dr 700 ft. Joe Marr et al's Maxwell 1, 35-3-8e, sd 3622 ft.

DE SOTO PARISH—J. W. Clark's Tidwell 1, 22-13-14, 6⅝ cas 2910 ft, tested sw show oil and gas 3130 ft, plugged back to 3125 ft, dry abn, td 3655 ft. W. H. Weichert's H. Smith 1, 31-14-15, top gas sand 1653 ft, top chalk 1901 ft, sd rep rig 2306 ft. Standard Oil Co. of La.'s Farmer A-5, se sw 32-14-13, 10-inch 42 ft, dry abn in red shale, td 2920 ft. Neff et al's Dowling 1, se se 18-13-14, base chalk 2040 ft, coring sandy shale 2928 ft; Ramsey 1, 33-13-16, 12½ cas 80 ft, sd repr rig 1601 ft. S. A. Guy et al's Dowling Bros. 1, 31-14-14, sd 1354 ft.

LA SALLE PARISH—La. G&F Co.'s Tensas Delta B-2, sw ne 23-7-4e, 9-inch cas 982 ft, sw 2641 ft, coring 3448 ft.

NATCHITOCHES PARISH—C. M. Talley et al's Talley 1, 29-11-10, 10-inch 60 ft, dr 930 ft. Gulf Ref. Co.'s Bodcaw Lbr. Co. 1, sw ne 13-13-8w, 12½ cas 930 ft, dr lime and shale 3325 ft. W. M. Coates et al's Collins 1, 28-9-10, base chalk 2612 ft, co td 3718 ft. J. W. Cooper et al's Cooper 1, 35-11-10, tested dry through ds in 3 ft sandy shale 2829-32 ft, coring 2840 ft; Cooper 2-A, 35-11-10, top chalk 1400 ft, claim show oil and gas, arr make ds test, td 1515 ft.

RED RIVER PARISH — Lucky Strike Oil Co.'s Chaffraix 1, 32-12-10, tested est 500 bbls sw show light oil through ds 2820-3010 ft, arr plug back shut off sw, td 3010 ft.

SABINE PARISH—Pearce, Tr.'s, Pearce 1, sw sw 10-7-11, 6⅝ cas 2339 ft, wosr, td 2600 ft. Lawrence et al's Hubley 1, 21-7-11, sd 2650 ft. J. C. Walton's Sabine 1, ne nw 11-7-12, 10-inch hole 102 ft, hole junked at 1310 ft, skidded over 15 ft, rig up new hole. Lacey Jesup Oil Co.'s Brown Lbr. Co. 1, se ne 28-8-10, 6-inch at top Z. marl 2256 ft, top chalk 2690 ft, sd 3160 ft. Lacey Pet. Co.'s Cooper 1, 30-8-11, top Z. chalk 2306 ft, 6⅝ cas 2270 ft, hfo wosr, td 2620 ft. R. L. Gay, Tr.'s, Sabine A-2, ne nw 1-7-12, 10-inch 58 ft, 6⅝ 2276 ft, arr test 2750 ft. D. H. Reddick et al's Scretchfield 1, 18-9-12, sd 3310 ft. Pelican Nat. Gas Co.'s La. Long Leaf 8, nw sw 4-7-11, 10-inch 102 ft, cemtd 6-inch 2310 ft. P&G Oil Co.'s Williams 1, 21-7-12, rig. W. M. Coates (later T. G. Shaw's test) Sabine 1, 1-7-12, 6⅝ cas 2324 ft, dry abn, td 2683 ft. Trans-America Oil Co.'s Carter 1, 36-8-12, top marl 2311 ft, 6-inch 2211 ft, 700 ft oil hole, wo td 2540 ft. Longoria et al's Belton 1, 31-9-12, lcn abn, will not drill. Franks et al's Dew 1, 22-8-11, 6-inch 2111 ft, top marl 2265 ft, sd 2275 ft. D. M. Lide's Ponder 1, 15-7-11, top marl 2393 ft, top chalk 2407 ft, 6-inch 2385 ft, hfo wosr, td 2800 ft; Ponder 2, ne nw 15-7-11, sp 10-102 ft, dr 2000 ft. W. M. Coates' Sabine 2, nw sw 1-7-12, lcn abn; Sabine B-2, sw sw 1-7-12, lcn abn. Wilson & Sons' Gandry-Garrett 1, 4-5-13, sd 2460 ft. Tarver et al's Baker 1, nw ne 36-8-12, top marl 2209 ft, 8-inch 2212 ft, top chalk 2224 ft, base chalk 2752 ft, top Blossom 3040 ft, ta 4200 ft. Jno. Woodley's Sabine 1, ne se 12-8-12, 10-inch 103 ft. H. W. Perritt's Bowman-Hicks 2, 2-7-12, 10-inch 72 ft, top Z-marl 2199 ft, cemtd 6⅝ cas 2202 ft, making est 20 mil ft, spray oil, td 2220 ft; Bowman-Hicks 3, 2-7-12, 10-in 96 ft, sd 700 ft. Triangle Pet. Co.'s Sabine 1, sw sw 36-8-12, 6⅝ 2274 ft, sdtr 3 thribbles, ds cemtd 4½ cas 2260 ft, td 2274 ft. Diffie & Barrett's Lites 1, se nw 34-8-11, 10-inch 105 ft. Frank Melat, Inc.'s Sabine 1, ne sw 6-7-11, 10-inch 106 ft, dry abn, td 2500 ft; Sabine 2, ne nw 14-7-12, 6-inch 2250 ft, dry abn no chalk, td 2550 ft. J. M. Thompkins' Stoker 1, 10-7-11, 10-inch 105 ft, dr 1950 ft. Lyons & Neeley's Sabine 1, sw ne 12-7-12, 10-inch 120 ft, 6⅝ cas 2273 ft, dr 2280 ft. Magnolia Pet. Co.'s Lucius 1, nw ne 2-3n-12w, 13⅜ cas 204 ft, showed oil 2595-99 ft, dr black shale 3525 ft. Gautier et al's Meshell 1, se nw 30-8-12, sp 10-inch 100 ft, dr 500 ft. Ohio Oil Co.'s Bowman-Hicks 6, se nw 2-7-12, 10-inch 205 ft, arr set 6-inch cas 2200 ft. Davis et al's Polly 1, 18-8-12, sp 10-inch 105 ft. Caddo-Sabine Synd.'s Smith 1, 8-7-10, rig. Merritt, Tr.'s, Byrd 1, se nw 1-7-11, lcn.

UNION PARISH—Ouachita Nat. O&G Co. Inc.'s, Smith 1, sw ne 36-20-2e, 13-inch cas 280 ft, 6-inch 2101 ft, td 2141 ft.

WEBSTER PARISH—Gerhig Co.'s R. H. Miller 1, ne sw 16-18-10, 12½ cas 200 ft, base chalk 2070 ft, dry abn 3508 ft. D. M. Coyle's Frazier 1, ne se 27-23-11, dk. Cassidy & Davis, Nickerson 1, ne sw 29-23-10, sp dr 160 ft. Red Hawk Oil Co.'s Matthews 1, se nw 11-23-9, cemtd 12½ cas 100 ft, dr 250 ft.

KANSAS

MORTON COUNTY — Hydraulic Oil Co., State land 1, nw se, 22-34-43w, sd 3460 ft.

STEVENS COUNTY—Sidwell et al's Kelly 1, sw ne, 16-34-38w, (owd) dr 1905 ft.

COWLEY COUNTY—Fisher et al, Hurt 1, c sw se se 11-34-3 east, ru.

STEVENS COUNTY — McNabb and Mid Kansas, Rinehart 1, c ne, 23-32-39w, 2380-2712 ft, 6M gas.

COWLEY COUNTY—Tom Fine, Boyd 1, nw ne, 32-32-4e, 12-inch 1265 ft, td 2650 ft. Roth and Farrot, Reidy 1, c sw nw ne, 8-32-4e, sd 1040 ft.

HARPER COUNTY—Beeler et al, Bear 1, c ne, 21-31-6w, ed 1830 ft, sd.

BARBER COUNTY—Allison & Fitzwilliams, Kumberg 1, c se sw se, 2-30-12w, td 4801 ft, hfw sd.

SEDGWICK COUNTY—Buck et al, McNanaman 1, c ne nw nw 2-20-1e, spd.

KIOWA COUNTY—McKenna et al, Ralston 1, c ne, 14-28-20east, ru sd.

KINGMAN COUNTY—Skelly Oil, Miles 1, ne c, 30-27-10w, 1634-40 ft, est 2M gas; 2005-20 ft, 6M gas; 2133-42 ft, 3M gas, bradenhead; K. C. L. 3385-99 ft, td 3441 ft, flow 216 bbls 12 hrs, sd.

SEDGWICK COUNTY—Streeter & Stearns, Tobin 1, c sw se ne, 5-27-2e, 2988-92 ft hfw, rng 6-inch.

PRATT COUNTY—Wilcox, Unknown 1, sw nw 7-26-15w, 6-inch 4396 ft, dr 4895 ft.

FORD COUNTY—Swain et al, Kenthorn 1, c nw, 21-25-24w, 6-inch 4308 ft, dr 4400 ft.

HARVEY COUNTY—Empire & Shell, Showalter 1, nw se, 23-23-2w, dr 610 ft.

MARION COUNTY—Maidwell, La Master 1, nw c, 31-22-4e, sd 650 ft.

GREENWOOD COUNTY—T. K. Simmons, Barnard 2, sw se se 19-22-12e, sd 650 ft.

COFFEY COUNTY—Hegberg et al, Kroft 1, se sw se, 30-22-14e, 10-inch 818 ft, td 1300 ft sd. Roberts et al, Hay 1, sw se nw 32-22-15e, td 1250 ft, sd.

BARTON COUNTY—McCool et al, Tsern 1, c sw se ne 12-20-11w, sd 1600 ft.

RICE COUNTY—Cress et al, Sharp 1, se ne 13-20-10w, dr 735 ft.

RUSH COUNTY—Dewey & Mitchell, Greenwalt 1, c sw, 17-19-16w, dr 400 ft.

RICE COUNTY—Skelton Oil, Ott 1, c se se, 16-19-14w, sd 1855 ft. Muth Bros., Beyers 1, ne nw 21-19-9w, 2000-2002 ft, 3M gas; 6-inch 3070 ft, td 3174 ft, co.

McPHERSON COUNTY — United Pet. & Shell, Kaegi 1, ne c, 20-19-1w, 6-inch 2919 ft, T. Chat 2912 ft, td 2935 ft, est 1 M gas. Henderson & Holden, Sommerfield 1, c ne sw 23-19-1w, Base Ls. 3154 ft, td 3217 ft, ur 6-inch.

LYON COUNTY—Griffith et al, King 1, nw c 8-19-102, 12-inch 910 ft, sd.

BARTON COUNTY—Syndicate Oil, Boertz 1, c nw se ne, 13-18-12w, spd and sd.

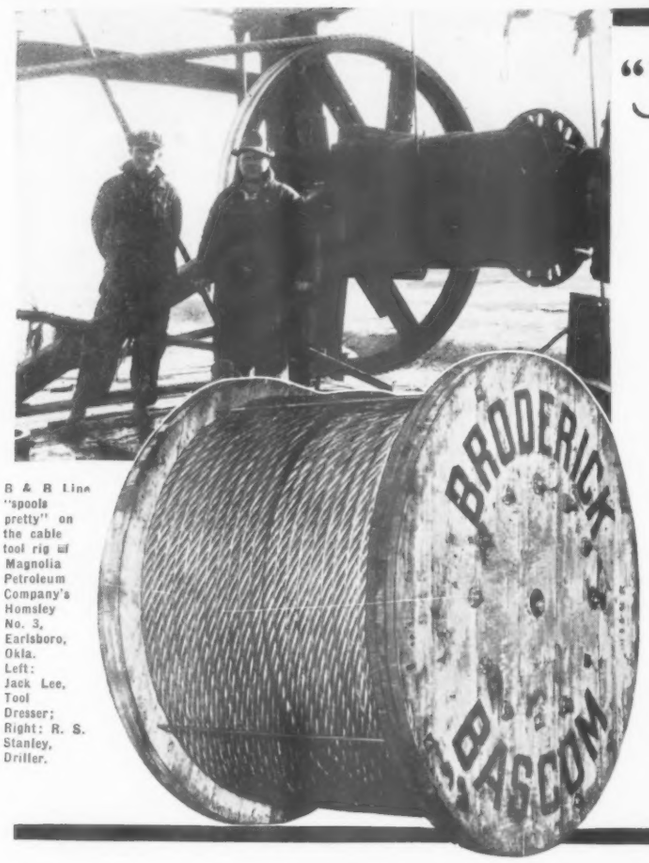
RICE COUNTY — Allison & Fitzwilliams, Blake 1, ne nw 9-18-10w, rig. McFadden & Shell, Jennings 1, c sw ne nw 29-18-6w, ru, mach.

McPHERSON COUNTY—Alladin Pet. Co., Larson 1, c nw, 22-18-4w, rig.

MARION COUNTY—Alladin Pet., Rudolph 1, nw ne, 36-18-3w, rig.

NESS COUNTY—Gypsy, Coleman 1, c sw ne, 25-17-25w, 8-inch 3860 ft, rust.

ELLSWORTH COUNTY — Aylward et al,



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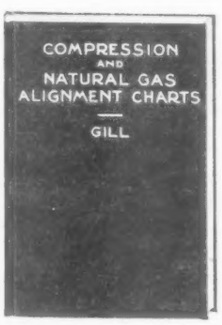

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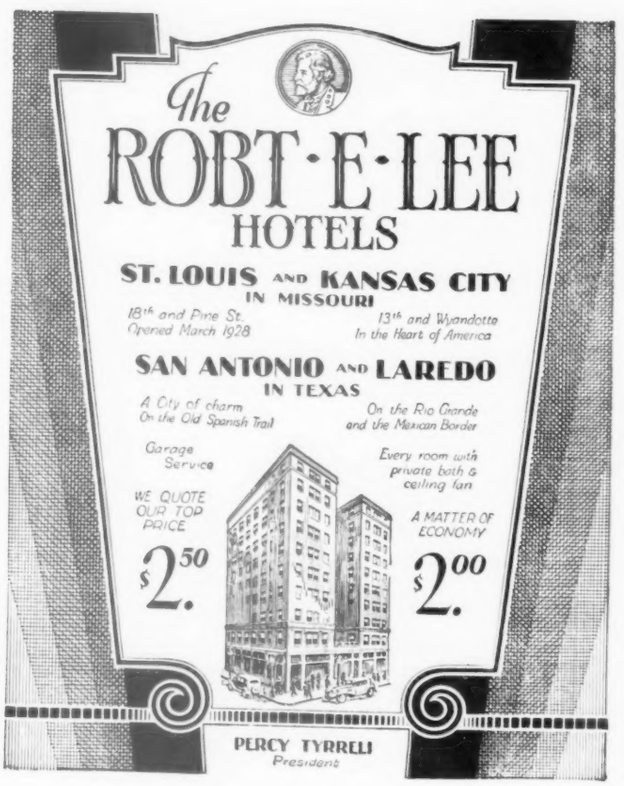

Stratman 1, c se nw se, 1-17-10w, sp and sd. Gilmore Oil Co. et al, Sturn 1, nw sw 21-17-9w, rig.

McPHERSON COUNTY—Slick et al, Sandell 1, c sw sw, 35-17-3w, 6-inch 3005 ft, dr 3026 ft, hfw.

MORRIS COUNTY—Urschell et al, Bersuch 1, c nw se nw 10-17-7e, ru sd.

ELLSWORTH COUNTY—Alladin & Marland, Barecky 1, c nw, 3-16-10w, 6-inch 3280 ft, td 3305 ft, fsh tools. Alladin et al, Stoddenberg 1, c sw, 22-15-10w, sd 1130 ft.

MORRIS COUNTY—Great Basin Oil Ballyntine 1, c sw se se, 18-16-5e, td 1710 ft, sd. Hankenson et al, Cessnum 1, sw se 24-16-9e, dr 600 ft.

ELLSWORTH COUNTY — Milton et al, Kaster 1, se ne 6-14-9w, td 1476 ft, est 2M gas, sd. Hershey et al, Schaltz 1, c ne 9-14-8w, rig.

SALINE COUNTY—Sampson et al, Sudendorf 1, ne se 30-14-2w, 8-inch 2692 ft, 2785-90 ft, hfw, dr 2985 ft.

OSAGE COUNTY—Riggs-Smith, Wood 1, c se nw, 31-14-15e, 10-inch 1050 ft, td sd.

RUSSELL COUNTY — Austin Drlg. Co., Rockefeller 1, se c 6-13-12w, T. Oswald 3003 ft, oil 3042-44 ft, bailed 18 bbls in 3 hrs, 6-inch 3044 ft, sd set with packer, sd.

SALINE COUNTY—Twin Mounds Oil Co., Weis 1, c w½ ne nw, 30-13-4w, (owd) 19-inch 1010 ft, sd 2710 ft.

DICKINSON COUNTY—Severs et al, Livingood 1, ne sw 13-13-2e, TL 2315 ft, 3047 ft hfw, sil L. 3036 ft, dr 3623 ft.

GOVE COUNTY — Johnson & Atlantic, Wright 1, c se ne 11-12-27w, 3500-3510 ft, hfw 3815 ft, hfw 6-inch 4532 ft, hfw 4625 ft, dr 4640 ft.

RUSSELL COUNTY—Gilbreath et al, Bratton 1, c ne, 33-11-13w, 8-inch 2458 ft, td 2814 ft, fsh.

GRAHAM COUNTY—Schleimer et al, Clark 1, c sw ne ne 11-9-25w, T. Big Lime 2465 ft, sd 3790 ft.

CLAY COUNTY—Nebraska Oil, Tivier 1, sw c 19-8-9e, sd 2390 ft.

ROOKS COUNTY—Empire, Holsman 1, c sw ne se, 17-7-20w, td 1335 ft, fsh.

WASHINGTON COUNTY — Simcox, Penwell 1, nw se ne 16-3-3e, 6-inch 1210 ft, sd 1720 ft.

RAWLINS COUNTY—Danciger et al, Unknown 1, sw c 3-2-35w, sd 2005 ft.

OKLAHOMA

ALFALFA COUNTY—T 27n, R 11w, Sec. 12, Smith Bros., Forbes 1, ne c se nw nw, sd 1420 ft.

KAY COUNTY—T 27n, R 2e, Sec. 9, Mummer et al, Sornick 1, nw c se, hfw 2070-2170 ft, ur 8-inch 2330 ft, sd 2700 ft. T 26n, R 1w, Sec. 32, Boucher et al, Jefferson 1, ne c sw, dr 1535 ft.

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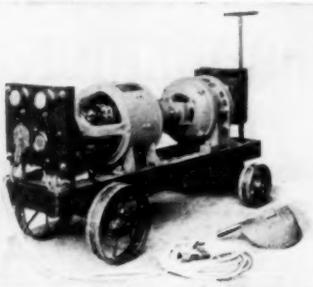

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HARPER COUNTY—T 25n, R 20w, Sec. 12, Empire, Bruce 1, sw c ne ne sw, sd 7935 ft td.

GRANT COUNTY—T 25n, R 4w, Sec. 22, Cowden, Collmer 2, ne c se ne sw, lost tools 5640 ft, sd.

ALFALFA COUNTY—T 24n, R 11w, Sec. 14, J. V. Bailey et al, Acre 1, c sw ne, dr 5125 ft.

GARFIELD COUNTY—T 24n, R 6w, Sec. 9, Pulse, Beamer et al, White 1, se c nw, dr 5833 ft, crooked hole.

NOBLE COUNTY—T 21n, R 1e, Sec. 12, Barnsdall et al, Miksch 1, nw c sw, hfw 4934-26 ft, to abandon.

BLAINE COUNTY—T 19n, R 10w, Sec. 13, Washoma Pet. Co., Phillips 1, c nw sw, sd hfw 4535-37 ft.

LOGAN COUNTY—T 18n, R 3w, Sec. 33, Healy et al, Quier 1, se c sw, sd 3970 ft.

KAY COUNTY—T 28n, R 3e, Sec. 24, Summitt Drlg. Co. et al, Hays 1, nw ne nw, dr 1915 ft.

OSAGE COUNTY—T 28n, R 7e, Sec. 4, L. G. Stanley et al, 1, se c sw, dr 1895 ft.

PAWNEE COUNTY—T 23n, R 5e, Sec. 15, Cochran et al, McFadden 1, ne c sw, rig. T 22n, R 5e, Sec. 2, Sherry et al, Millsap 1, se c sw, sd 1750 ft. T 20n, R 5e, Sec. 6, W. A. Rookstoll, Berry 1, nw ne sw, dr 1951 ft show gas.

LINCOLN COUNTY—T 13n, R 7e, Sec. 8, Atlantic OP Co., Beebe 1, sw ne sw, lcn.

OKFUSKEE COUNTY—T 12n, R 10e, Sec. 3, Shepard et al, Shepard 1, se nw sw, fsh csg & dr by 3690 ft.

PITTSBURG COUNTY—T 9n, R 16e, Sec. 32, Pattison et al, McDuff 1, sw nw se, fsh tools 5682 ft. T 8n, R 14e, Sec. 14, C. O. Cannady et al, Smith 1, sw c ne nw nw, rig and tools. T 7n, R 14e, Sec. 5, C. O. Cannady et al, Travis 1, c sw ne, rig. T 6n, R 15e, Sec. 7, Peerine et al, Ringland 1, nw c ne spudded and shut down.

LATIMER COUNTY—T 6n, R 18e, Sec. 4, Choctaw Gas Co., Weaver 1, c ne nw, rig. T 6n , R 19e, Sec. 16, P. English et al, Weaver 1, c nw se, sd 300 ft.

ATOKA COUNTY—T 1n, R 15e, Sec. 9, Edgerton et al, Rolland 1, c nw, sd 700 ft.

OKLAHOMA COUNTY—T 14n, R 3w, Sec. 32, Mid-Kansas, Messer 1, sw c, wx 6690-6771 ft, shot 170 qts, flowed 350 bbls, completed. T 12n, R 4w, Sec. 17, C. F. Cuniff, Trustee, St. Joseph 1, sw c ne sw se, td 6700 ft, sd.

POTTAWATOMIE COUNTY — T 10n, R 4e, Sec. 10, Shell, Baker 1, nw c se, lcn abn.

SEMINOLE COUNTY—T 10n, R 6e, Sec. 19, Bunte et al, Bruner 1, se c nw, rig.

HUGHES COUNTY—T 7n, R 9e, Sec. 17, Gilcrease, Buckner 1, ne nw se, pipe stuck 2167 ft.

ROGER MILLS COUNTY—T 13n, R 21w, Sec. 10, Richfield O&R, Hiatt 1, se c, rig. T 12n, R 24w, Sec. 23, Ute Oil Co. et al, Williams 1, c sw, 10-inch 3346 ft, rust. T 11n, R 26w, Sec. 4, J. J. Rock et al, Davis 1, c nw ne (owd), sd 2840 ft.

CANADIAN COUNTY—T 10n, R 6w, Sec. 1, J. V. Bailey, Robinson 1, c ne nw, sd 150 ft.

CADDO COUNTY—T 9n, R 13w, Sec. 18, J. J. Wright et al, Boys 1, nw c, lcn.

WASHITA COUNTY—T 8n, R 19w, Sec. 29, Snodgrass et al, Blocker 1, nw c, dr 908 ft.

WASHITA COUNTY—T 8n, R 18w, Sec. 21, Burns & Prince, May Dock 1, sw c, sd 150 ft.

GREER COUNTY—T 7n, R 22w, Sec. 1, Roy Good et al, Cliffel 1, nw c, sd 1461 ft, small show gas. T 7n, R 21w, Sec. 23, H. A. French et al, Murphy 1, sw nw se, sd 1490 ft, small show oil.

HARMON COUNTY—T 4n, R 24w, Sec. 17, Harmon-Tex Oil Co., Headley 1, ne c, sd 2592 ft.

COMANCHE COUNTY—T 3n, R 9w, Sec. 3, Okla. Nat. Gas Co., Doegel 1, ne c sw sw, sd 1450 ft.

STEPHENS COUNTY—T 1n, R 8w, Sec. 25, Ross Southard, McKinley 1, ne c, sd 1063 ft. T 1n R 7w, Sec. 1, Junior Oil Co., Thompson 1, ne sw se, dr 2600 ft. T 3s, R 8w, Sec. 3, A. L. Andree, Patrick 1, c s2 se, sd 1369 ft.

HUGHES COUNTY—T 5n, R 11e, Sec. 15, J. J. Wright, Roberts 1, se c sw, ¶2 915-18 ft, sd 1645 ft.

GARVIN COUNTY—T 2n, R 2w, Sec. 24, Malernee Oil Co., Phillips 1, ne c sw, lcn.

COAL COUNTY—T 2n, R 8e, Sec. 10, Whitney et al, Miller 1, se c ne, (owd) sd 760 ft.

T 1n, R 8e, Sec. 35, W. E. McCraw O&G, String 1, ne c se, rig.

ATOKA COUNTY—T 3s, R 10e, Sec. 18, Brookshire et al, Guinn 1, nw c, show gas 360-72 ft sd 500.

CARTER COUNTY—T 4s, R 2e, Sec. 32, Tex-Okla. Drlg. Co., Anderson 1, se ne se, sd 2656 ft.

BRYAN COUNTY—T 6s, R 7e, Sec. 14, W. A. Johnson 14, Ussery 1, se c sd 325 ft. T 7s, R 10e, Sec. 8, Bryan Oil Co., Childs 1, ne se sw, sd 660 ft.

LOVE COUNTY—T 8s, R 1e, Sec. 13, Geo. Pace et al, Burkhart 1, ne c nw, dr 2280 ft.

NORTHERN CALIFORNIA

Completions

SANTA BARBARA COUNTY—

J. H. Cochran's No. 1, 7-4-29..... * 5135

Standard's Gerber 1 ..... * 6820

KERN COUNTY

BELRIDGE—Belridge Oil Co.'s No. 27-8, 27-27-20, plugging back from 3440 ft to 1500 ft to straighten hole; No. 27-64, 27-27-20, rig; No. 35-8, 35-27-20, 16-inch cas cmt 1025 ft; No. 35-33, 35-27-20, plugged back to 2000 ft to straighten hole; No. 35-48, 35-27-20, dr shale 3675 ft. Tom Cannon's Fay 1, 18-20-22, rig. Casa Mira Oil Co.'s Theta 2, 29-28-20, rig. General Pet.'s Berry 1, 30-28-21, re-dr, td 3470 ft. Ohio's Bloemer 1, 36-27-20, dr hard brown shale 5350 ft. Reward Oil Co.'s Associated 4, 34-27-20, dr brown shale 3275 ft. Standard's McPhail 1, 36-27-20, sd 4528 ft; McPhail 2, 36-27-20, sr 4275 ft. Texas' Martin 1, 22-27-20, dr brown shale 4215 ft. Union's Belridge 17, 36-27-20, dr hard brown shale 4770 ft; Gibson 7, 36-27-20, lcn; Bacon 1, 21-28-20, dr shale 1468 ft. K. C. Wallace's No. 1, 32-29-21, dr hard brown shale 4115 ft.

BUENA VISTA HILLS—Federal Drilling Co.'s No. 6, 20-31-24, swabbed water, td 5232 ft, pulling tubing.

BUTTONWILLOW — Wilshire Oil Co.'s Nordon 1A, 7-29-24, co 6583 ft.

DELANO — Chanslor-Canfield Midway Oil Co.'s Villard A1, 31-25-28, dr shale 1028 ft.

DEVIL'S DEN—Standard's Alferitz 1, 14-25-18, dr hard brown shale 1650 ft.

EDISON—Sy Wicker's No. 6, 12-30-28, rig-gig up.

McKITTRICK — California Oil Producers' Wisecarver 1, 30-30-22, dr shale 5560 ft.

SEMITROPIC—Shell's Williams 1, 17-27-23, dr hard gray sand 9420 ft.

WASCO — Cities Service Pet. Co.'s Core Hole 1, 16-28-24, dr shale 2165 ft.

WEED PATCH—Mohawk Pet. Co.'s Wharton 1, 32-30-29, 8⅝ cas cmt 5645 ft, td 5966 ft. Shell's Morris 1, 32-30-29, dr shale 1850 ft; Porter 1, 29-30-29, dr hard shale 5428 ft; Porter-Day 1, 29-30-29, dr hard shale 7106 ft.

SANTA BARBARA COUNTY

COAL OIL POINT—Bolsa Chica Oil Corp.'s Augur Permit 191-1, 24-4-29, will make third production test after plugging off more hole, td 4191 ft, well swabbed water and only small amount of oil on second test.

CUYAMA—Cuyama Valley Oil Corp.'s No. 1, 12-10-27, rigging up rotary. Hart Pet. Co.'s No. 1, 27-10-26, lcn.

GATO RIDGE—Barnsdall's Tegnazzini 1, 9-8-32, fsh for drill pipe 6032 ft.

GOLETA—General Pet.'s More 3, flowed gas on production test, killed to deepen, td 4261 ft.

ORELLA—Prairie Oil and Gas' El Capitan 1, dr shale 2300 ft.

SANTA MARIA—O. C. Field Gasoline Co.'s Bradley 1, pumping 13.1 gravity oil, td 5265 ft. Western Gulf's Bradley 1, 5-9-33, dr shale 5348 ft.

VENTURA COUNTY

FILLMORE—Associated's Young 1, 16-4-20, lcn.

HOPPER CANYON—George H. Headley's No. 1, 13-4-9, dr shale 1040 ft.

OJAI—Dreadnaught Oil Co.'s Canet 1, dr shale 1710 ft.

RINCON — Chanslor-Canfield Midway Oil Co.'s Hobson A2, 23-3-24, dr shale and streaks oil sand 8075 ft. Continental's Grubb 1, 23-3-24, rig.

SANTA MONICA MOUNTAINS—Olympic Corp.'s Calabasas 1, 18-1-17, re-dr 5640 ft.

SANTA PAULA — George C. Thompson's No. 1, 15-4-21, plugged to 1900 ft, will place on pump.

SESPE—Merchant's Pet. Co.'s Cochran 1, 1-

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4-20, co 400 ft. Superior's Kirtlan 1, 15-4-21, 11¾-inch cas cmt 5363 ft.

VENTURA—Prairie Oil and Gas' Sexton 1, 30-3-22, dr shale 8485 ft.

MISCELLANEOUS

FRESNO COUNTY — Amador Coalition Mines' No. 1, 26-20-14, dr 400 ft. Associated's Jacalitos-Mitchell 1, dr shale 3792 ft.

KINGS COUNTY—L. W. Seymour's No. 1, 10-23-16, dr out cmt 1010 ft. T. H. Purman's Avenal 1, 36-23-17, dr shale 2525 ft. Murphy Oil Co.'s Brennan 1, 20-23-20, dr gray sand and shale 3348 ft.

MENDOCINO COUNTY—Twin State Oil Co.'s Soldani 1, 14-12-17, dr shale 5822 ft.

MONTEREY COUNTY—Pacific Inland Oil Co.'s No. 1A, 19-23-15, dr shale 1000 ft.

SAN LUIS OBISPO COUNTY—Continental's Heilman 1, 26-25-11, dr shale 3965 ft. Pismo Dome Oil Co.'s Pricco 2-A, 5-31-13, cmt 8¼-inch cas 2860 ft, td 2965 ft.

SANTA CRUZ COUNTY—Wellton Oil and Gas Co.'s Galletly 1, dr shale 2818 ft.

TULARE COUNTY — Big Four Drilling Co.'s No. 1, 29-23-27, co 4330 ft. Ducer Pet. Co.'s Zimmerman 1, 14-24-27, sdtr iron 2180 ft. Turk and Campbel's Nevins 1, 34-22-27, dr 1400 ft. Inland Valley Oil Co.'s Smith-Rea 1, 24-17-24, dr hard shale 2175 ft.

YOLO COUNTY—George F. Getty's Guinda 1, sd 2007 ft.

SOUTHERN CALIFORNIA

ALHAMBRA — George Wolfe's Huntington Land 1, 24-1-13, dr shale 2440 ft.

ATHENS — McKeon Oil Co.'s Sunnyside Heights 1, 1-3-14, dr gray sand 5500 ft.

BELL—Cudahay Community Oil Assn's No. 1, 30-2-12, sd 510 ft.

CORONA—Western Gulf's Abacherli 1, 12-3-8, dr shale 1715 ft.

CULVER CITY — Olympic Oil & Realty Co.'s No. 1, 14-2-15, dr out cmt 4836 ft. Taylor Oil Co.'s No. 1, 12-2-15, dr shale 5305 ft

EL MONTE—Rancho Oil Corp.'s Harmon 1, 30-1-11, dr shale 3475 ft.

FULLERTON — Standard's Bastanchury 1, 21-3-10, dr shale 7700 ft.

HERMOSA—Calico Royalty Series' No. 1-3, dr 500 ft. California Ventura Oil Co.'s Sadler 2, running tubing, td 3330 ft. Smith Pet. Co.'s No. 1, 6-4-14, rig. R. C. Thomas' No. 1, 6-4-14, material for rig. Tulsa Oil Co.'s Hermosa 2, 6-4-14, sp. Westwood Pet. Co.'s No. 1, 6-4-14, rig.

MANHATTAN—Staple Oil Co.'s No. 1, 24-3-15, running stovepipe, td 530 ft.

NEWHALL—Consolidated Oil Co.'s Hammond 1, 8-3-16, dr hard sand 2450 ft.

NEWPORT—T. F. Gesell's No. 1, 29-6-10, co 765 ft. Standard's Irvine 1, 26-6-10, coring 3450 ft.

OLIVE—Texas' Olive Community 1, 7-4-9, dr hard sand 2390 ft.

PLAYA DEL REY — Mesmer City Realty Co.'s No. 1, 24-2-15, rig. West Port Pet. Co.'s No. 1, 27-2-15, fsh for drill pipe 5590 ft.

PUENTE—C. F. Shannon's No. 1, 3-2-10, trying to pump, td 4620 ft. Vega Pet. Corp.'s Rowland 1, pumping oil and water, td 2510 ft. Rucker and Croul's Grazide 2, 22-2-10, dr shale and sand 1388 ft.

REPETTO HILLS—Texas' FMB.1, 4-2-12, dr 700 ft.

SAN FERNANDO—Mack Oil Co.'s Deer Lake 1, 6-2-16, rig. San Val Oil Co.'s No. 1, 14-1-16, dr hard limestone 2000 ft.

SANTA MONICA—Hines Pet. Corp.'s No. 1, 8-2-15, rigging up rotary.

SAN JUAN CAPISTRANO—Okay No. 2's Foster 2, 13-8-8, sd 5220 ft.

TORRANCE—C. M. Sheeley's No. 1, 12-4-14, rig.

ARKANSAS

Completions

JOHNSON COUNTY—		
Ark. La. P. L. Co., Hudscn 1, 14-10-24	1941½	3164
UNION COUNTY—		
Marine Oil Co., W. B. Thompson B-3, 10-18-13	165	3557

CHICOT COUNTY—H. R. Smith's Lytle 1, 31-18-3, cemtd back to 2865 ft, arr whipstock, old td 2925 ft.

CLAY COUNTY—S. C. Jeffus, Tr.'s, Underwood 1, nw ne 4-20-8e, old well compl as 1½ mil ft gasser at 330 ft, dr gumbo 556 ft.

CLEBURNE COUNTY—Donnell et al's Fee 1, 33-11-9, swedging out cas at 2300 ft, td 3740 ft.

DALLAS COUNTY — John James, Tr.'s, Fordyce Lbr. Co. 1, ne nw 11-9s-15w, 10-inch 176 ft, dr gumbo 1462 ft. E. C. Brewer, Tr.'s, Hillman 1, se ne 20-10-13, 10-inch 88 ft, coring shale and shells 2454 ft.

GARLAND COUNTY—H. H. Given's Garrett 1, 1-3n-19w, cas pulled, hfsw td 3756 ft.

GRANT COUNTY — Spann & McClung's Sarah Page 1, sw nw 3-3-12, dr 306 ft.

HOT SPRINGS COUNTY—John Watkins, Tr.'s, Cunningham 1, 11-5-16, sd 100 ft. Cleary Bros. et al's Hinson 1, 19-4s-16w, 11 ft sand, sd 1604 ft.

JOHNSON COUNTY—Ark. La. P. L. Co.'s Hudson 1, se ne 14-10-24, 10-inch 2607 ft, 8-inch with bradenhead 2875 ft, gauged 41,300,000 cu ft gas 1050 rock pressure, td 3164 ft. Blackwell O&G Co.'s Wyver 1, 21-8-23, ta 5600 ft.

LA FAYETTE COUNTY—Crawford Drilling Co.'s Vaughan 1, 25-19-25, rig. McIver et al's Hattle 1, nw ne 1-20-26, 12½ cas cemtd 115 ft, dr 1050 ft. Smitherman & McDonald's Reed 1, se nw nw 16-15-22, 12½ cas 42 ft, cored oil sand 1190-92 ft, cored oil sand 1192-94 ft, tested 3 joints mud show oil through ds in 1 hour 1172-94 ft, cemtd 8¼-inch cas 1176 ft, td 1194 ft.

LAWRENCE COUNTY—Marguerite Dev. Co.'s Broadway 1, 31-17-1, sd 45 ft.

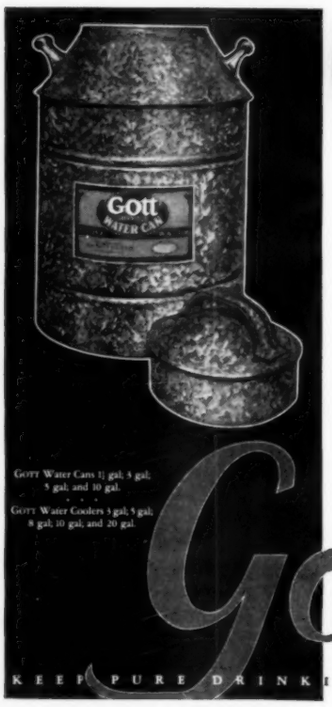
LITTLE RIVER COUNTY—Buck Oil Co.'s Taafe 1, 25-12-32, tested small show gas and sw through ds 2770-2819 ft, td 2819 ft. Fay Roberts Oil Co.'s Russell 1, nw nw 25-12-29, lcn.

LOGAN COUNTY—M. W. Greesom's Parks 1, 21-8-24, sd 1309 ft. J. H. Flowers' White 1, 13-5-26, sd while ur 5 3/16 inch cas at 3570 ft, td 3610 ft.

MADISON COUNTY—J. W. Baxter's Hallam 2, cent sec 17-16-26, sd 405 ft; Hallem 3, ne sw 1-17-26, sd 42 ft.

MILLER COUNTY—E. & F. Oil Co.'s E. L. Beck 1, 36-15-26, 6⅝ cas 2792 ft, 4½ cas 2957 ft, tested sw 2961 ft, sd 2968 ft. Lenz et al's Johnson 2, 24-15-26, dr est depth 4420 ft; Johnson 3, ne nw 24-16-26, sd 2850 ft. Bullock Oil Co.'s Hervey 1, 2-15-26, coring 2915 ft. East Texas O&G Co.'s Hervey 1, 2-15-26, sd 900 ft. Gusher Bend Oil Co.'s Adams 1, nw nw 24-14-26, 10-inch 115 ft, dr 1850 ft. O'Mara et al's Person 1, 31-15-25, lcn. Fitzwater et al's Beck 1, sw se 33-15-26, 10-inch 85 ft sd. Salzaer & McRae's Rose 1, ne nw 9-16-26, 10-in 98 ft, sd 475 ft. J. D. McRae's Smith 1, nw se 28-15-26, dk.

OUACHITA COUNTY — Belmont et al's Dean 1, 16-15-17, top red beds 2765 ft, sd with junk in hole 2907 ft. Copenhaver et al's Elliott 1, se se 11-15-17, ds recovered co, td 2114 ft. Wesson & Bonner's Wesson 1, sw nw 22-



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15-19, 6⅝ cas 2083 ft, wo power to pump, 300 ft fluid in hole, td 2169 ft. J. D. Renolds' Pace 1, ne se 21-15-19, (Stephens townsite), 10-inch 44 ft, cored Nacatosh 1505-11 ft, did not test Nacatosh, cored oil sand 2152-58 ft, 6-inch 2149 ft, 1000 ft oil in hole, wosr, td 2204 ft; Grayson 1, 21-15-19 (900 ft sw Pace 1), rig.

PIKE COUNTY—Henderson et al's Tilyou 1, 26-8-24, show heavy oil 567 ft, sd 2110 ft. E. R. Henderson's Lee 1, sw se 31-8s-24w, dk.

POPE COUNTY—Ark. La. P. L. Co.'s McFadden & Brooks 2, ne nw 15-9-21, 13⅜ cas 1900 ft tested est 1 mil ft gas 3285 ft 8⅝ cas 3415 ft, 8-in 3451 ft dr sand 3504 ft. Baird 1, se nw 11-7n-20w, mov in rig.

SCOTT COUNTY — Heavener O&G Co.'s Reser 1, 36-4-26, sd 1536 ft. Ark. Valley Gas Co.'s Turner 1, se se 27-5n-30w, lcn. Waldron O&G Co.'s J. G. White 1, sw nw 17-3n-29w, gas show 400 ft, dr shale 1315 ft.

SEBASTIAN COUNTY — Hickman et al's 1, 35-16-17, top Graves sand 2351 ft, top red beds 2779 ft, hole cleaned r to bot td 3070 ft. Oilfields Corp.'s J. A. Simmons 1, nw nw 9-18-13, ta 3602 ft. Rice et al's Whatley 1, 7-17-13, sd 1520 ft. Marine Oil Co.'s W. B. Thompson B-3, se ne 10-18-10-in 292 ft 6⅝ 3551 ft, 4 ft sand 3554-57 ft, flowing 165 bbls oil day thru 2½-in tub td 3557 ft. W. B. Thompson B-2, se ne 10-18- 13, dk. Southern Prod. Co.'s Wingfield 1, se nw 16-19-15, 10-in 210 ft, sd. Wilson & Chapman's Hadley 1, ne sw 3-18-13, 10-in 102 ft, top Nacatosh 2300 ft, top Meekin sand 2550 ft, top red beds 2933 ft, dr 2980 ft. Sunby et al's Perdue 2, nw nw 33-16-14, fsh 4-in ds td 3247 ft.

WASHINGTON COUNTY — Taylor et al's Runny 1, 1-13-29, sd 1702 ft. Lincoln Lease Holding Synd.'s Townsite 1, 30-15-32, ta 1500 ft. C. H. Willoughby's Jones 1, 34-16-30, sd 2150 ft. O'Hara & Shetterley's Boyd 1, 12-16-32, ta 850 ft. Delbert Graves' Cunningham 1, 14-15-32, sd in gray sand 602 ft.

VAN BUREN COUNTY — J. S. Martin's Scanland 1, 5-9-13, sd 50 ft.

YELL COUNTY—T. Luckett's Balcon 1, 36-7-21, sd while fsh tools td 5710 ft.

MISSISSIPPI

CLAY COUNTY—Ohio Oil Co.'s Cantrell 1, ne ne 16-15-5e, elev 270 ft, 13⅜ cas 1389 ft, std td 2834 ft in hard lime.

COVINGTON COUNTY (Collins Dist.)—Miss. Gulf O&G Co.'s Pope 1, nw ne 35-8-16w, 12½ cas 126 ft, top Wilcox 2100 ft, sd in sandy shale 3000 ft. United Prod. Corp.'s McIntosh 1, sw ne 5-8n-16w, elev 321.5 ft, 12½ cas 805 ft tested 28 fourbles sw thru ds in 15 min 3271-78 ft sd in Wilcox 3378 ft.

CHICKASAW COUNTY—Hightower & Golsan's Fleming 1, 20-13s-3e, sd 1562 ft.

GRENADA COUNTY—Carter Oil Co.'s Dubard 1, nw nw 18-22-4e, dr rocks and shale 1700 ft.

HINDS COUNTY (Jackson Dist.)— Mrs. Ella Rawls Reeder's State Land 1, sw nw 25-6-1e, sd 2905 ft. Jackson O&G Co.'s Central Cotton 1, sw nw 3-5-1e, dk. Love Pet. Co.'s Maley 1, se nw 15-5-1e, elev 257.3 ft, top Midway shale 2387 ft, top chalk 2437 ft, 6⅝ cas 2487 ft, cemtd bot to shut off sw after well made 500 to 1000 bbls heavy oil in several weeks, along with much sw and 3 mil ft gas, td 2495 ft. Pirtle & Flint's Payne 1, sw sw 27-6-1e, rig. Southern Pet. Co.'s Wilson 1, se ne 23-6-1e, sd 20 ft. Miss. Pet. Co.'s Solvent 1, sw sw 14-5-1w, top Midway shale 2970 ft, cemtd bot of hole to sdtr drill pipe, collar and bit, sd td 3042 ft. Howard Oil Co.'s Jackson College 1, nw nw 9-5-1e, 12½ cas 15 ft, sd. Atkisson et al's Downey 1, ne ne 27-6-1e, rig. Gulf Ref. Co.'s McLaurin 1, sw ne 30-6-2e, top Midway shale 2392 ft, 9-inch cas 2466 ft, top chalk 2485 ft, showed sw trace of oil and considerable gas when bailed at td 2515 ft, deepened to 2632 ft, still in chalk where returns lost and regained twice, sd 2632 ft. Cane River O&G Co.'s Kabbes 1, ne sw 15-5-1e, elev 262 ft, top Midway shale 2435 ft, top chalk 2541 ft, cemented with 400 sacks cement to regain lost returns at 3270 ft in hd sand and red beds. Love et al's Ridgeway & McGehee 2, ne nw 2-5-1e, elev 271 ft, rig. Miss. Pet. Co.'s Baptist Orphanage 2, ne se 28-6-1e, 10-inch 632 ft, dr 2102 ft. Feazel O&G Co.'s Garrett 1, se ne 2-5-1e, elev 274.3 ft, top Midway shale 2347 ft, 6⅝ cas cemtd in shale, td 2427 ft. Love Pet. Co.'s Bob Taylor 1, ne sw 34-6-1e, 10-inch cemtd 775 ft, dr 2000 ft. Love et al's Payne

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1, sw sw 27-6-1e, sp 10-inch cemtd 750 ft. Gulf Ref. Co.'s School Board 1, ne sw 16-16-1e, elev 331 ft, rig (formerly carried United Prod. Corp.'s test).

JASPER COUNTY (Bay Springs Dist.)—Bay Springs Pet., Inc., J. H. Keyes 1, nw ne 21-2n-10e, cemtd 15½ cas 104 ft, sd.

KEMPER COUNTY (De Kalb Dist.)—W. W. Jones' Rosenbaum 1, lcn not given, dk.

LA FAYETTE COUNTY—F. E. West et al's May 1, 22-10-1w, rig.

MADISON COUNTY (Jackson Dist.)—Central O&G Co.'s Cameron 1, se se 11-9n-1e, 10-inch 201 ft, 6⅝ cas 1532 ft. (est. depth), bailed dry no show oil, gas or water, arr to deepen, td 1550 ft.

MONROE COUNTY (Amory Dist.)—Amory Dev. Co.'s Bourland 1, sw ne 2-13-19, sd in brown sand 3007 ft. P. J. McAlpine's Cowart 1, ne sw 2-12-19, 10-inch 694 ft, ur 8¼-inch cas at 1180 ft, to re-land at 1190 ft, td 1262 ft. Associated Royalties' School Board 1, sw se 16-15-17, sd 60 ft. Amory Pet. Corp.'s Harris 1, nw nw 18-13s-17w, setting 10-inch cas at top of rock 478 ft.

NESHOBA COUNTY (Philadelphia Dist.)—Collins et al's Carter 1, se se 29-11n-12e, elev 456 ft, 12½ cas 97 ft, dr shale 1075 ft.

RANKIN COUNTY (Jackson Dist.)—Love et al's Muse 1, se se 32-7-4e, 12½ cas 600 ft, arr resume dr in sandy shale and bldrs 1240 ft. Love Pet. Co.'s Moore 1, se nw 28-6-2e, sd 900 ft. Millstein O&G Co.'s Gammill-Hartfield 1, sw ne 6-5-2e, top Midway shale 2410 ft, top chalk 2496 ft, 7-inch O. D. cas 2476 ft, hole full fluid with 200 ft heavy oil at top, wo, td 2500 ft. Pioneer O&G Co.'s Ragland 1, sw sw 12-5-1e, dk. Ganzel et al's Stallings 1, ne ne 25-5-1e, 12½ cas 246 ft, top Midway shale 2579 ft, top chalk 2628 ft, tested 9 fourbles sw through ds 2628-49 ft, cor in chalk at 3020 ft for red bed top.

WARREN COUNTY (Vicksburg Dist.)—Dixie Pet. Co.'s Clark 1, nw nw 6-16n-5e, 12½ cas 77 ft, dr 1501 ft. Vicksburg O&G Co.'s Dornbusch 1, sw ne 8-18n-5e, sd 1600 ft.

WEBSTER COUNTY—Cumberland Oil Co.'s Henley 1, 15-21-11, ta 1865 ft.

WINSTON COUNTY (Louisville Dist.)—Miss. Drilling Co.'s Scarborough 1, nw nw 15-13n-14e, dr 2100 ft.

YALABOUSHA COUNTY (Water Valley Dist.)—J. D. Collett et al's Blackmer 2, sw nw 14-11s-4w, 12½ cas 103 ft, cor for Palezoics at 2400 ft.

ALABAMA

WASHINGTON COUNTY—Hobson et al's Wilson 1, 27-7-1w, sd in limey shale 881 ft; Hobson Bros. 1, 9-8-2w, sd 1450 ft. Oscar Brown's U. S. Land & Cotton 2, 25-3-2w, sd 700 ft.

TENNESSEE

DECATUR COUNTY—Chester County O&G Co.'s Montgomery 1, sd 2075 ft.

NEW MEXICO

CHAVES—Warman Oil Trust, Siebert 1, ne 27-13-24, stand 2035 ft.

DE BACA—Matador Oil Co.'s Wood 1, se 6-4n120e, to res at 3005 ft.

HARDING—Milwaukee Synd., Kerlin 1, se 34-21n-30e, dr at 115 ft.

LUNA—Angelus Oil Mining Ass'n 1, se 20-21s-10w, dr 5941 ft.

McKINLEY—J. W. Halsell's Santa Fe 1, 17-18-9w, sd 3255 ft. Wms et al's ATSF 1, se 19-18n-8w, stand 1900 ft. United Kern Pete, Inc., 1, sw 1-18n-11w, location.

OTERO—Ernest et al's 1, se 20-25s-7e, wtg for equip., 1328 ft.

QUAY—Silverstein et al's Wetzel 1, 29-12n-23e, stand 175 ft.

RIO ARRIBA—Berrenger et al's Hartman 1, ne 8-29n-7w, sd 825 ft. San Juan Pete Co., Gov't 1, se 14-30n-7w, sd 250 ft. Governador Oil Co.'s 1, se 12-29n-7w, sd 751 ft.

SAN JUAN—Dorothy Oil Co.'s Terwilliger 2, 29-30-9w, stand 1750 ft. Kutz Canon O&G Co.'s Day 1, se 20-28n-10w, dr 2175 ft. Childers Dr. & Pr. Co.'s Westwater 2, nw 23-31-16w, sd 2525 ft. Rio Grande Dev. Co.'s 2, 9-29-11, prep to res 1380 ft. Continental Oil Co.'s Rattlesnake 24, 1-29n-19w, fsh 4830 ft. J. B. Witt O&G Co.'s Magnum 1, se 33-29n-11w, lcn. San Juan Leaseholds, Bowman 3, ne 30-30n-15w, dr 2555 ft. Reserve Oil Co., Shaffer 3, se 36-22n-14w, dr 210 ft.

SAN MIGUEL—Pioneer O&G Co.'s Thunderbird 1, nw 14-15n-16e, wait 2340 ft. Starr Oil Co.'s Adams 1, ne 25-17n-16e, dr 3364 ft. Cibola Pete Co.'s Crown 1, se 9-13n-14e, dr at 816 ft. Hershfield Dev. Co.'s Cabra Springs 1, ne 12-12n-22e, stand 1542 ft. Kull et al, Cherryvalle 1, ne 34-17n-21e, spud 60 ft.

TORRANCE—Williams et al's Staplin 1, ne 16-8n-10e, stand 1643 ft. J. B. Witt O&G Co.'s Kutchem 1, 12-17-7e, stand 1465 ft.

VALENCIA — Acme Oil Co.'s N. M.-Ariz. Land Co.'s 1, ur to 5071 ft. Harlan et al, Harland 1-A, 5-6n-2e, dr 4570 ft.

WYOMING

BIG HORN—Westland Oil, Inc., 24-54-95, gas at 510 ft. Wisconsin Holdings, 5-55-97, sd 665 ft. Yellowstone Pete Co.'s 1, 7-57-97, sd 4080 ft.

CARBON—Midwest Refining Co.'s U. P. 27, 11-20-81, sd 1810 ft. Pete Expl. Co. of Calif., 29-23-89, dr 1000 ft.

CONVERSE—Converse O&G Co., 27-33-72, sd 1410 ft. Pioneer Oil Co., 5-31-70, to dr new test.

FREMONT—Texas Prod. Co.'s State 1, 36-44-95, sdtr 6⅝-inch at 4375 ft, td 4485 ft. P. & R. 1, 33-34-92, sd 4906 ft. Yellowstone Oil Co.'s 1, 15-39-92, td 185 ft. Ward O&G Co.'s 28-34-90, gas show 1500 ft. Maghee et al, 2, 35-33-99, dr 800 ft.

LINCOLN—Mountain Oil Corp.'s 1, 36-25-116, td 1500 ft. Wyo. Prod. Co., 14-24-113, dr bel 1000 ft.

NATRONA—Summit Oil Co., 21-33n-80w, dr 1250 ft last report. Midwest's 11, nw 32-34n-77w, dr 5309 ft. Cuyler Oil Co., 23-36n-85w,

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rig. Golden West Oil Co., 36-36-81, ready to res 1242 ft.

NIOBRARA—West Virginia Synd., 7-35-62, td 987 ft, cas trouble.

PARK—Resolute Oil Co., 17-57-101, sd 8250 ft, wait for orders.

SWEETWATER—Vermilion Oil Co.'s 1, se 16-12-99, sd 3500 ft.

UINTA—Park City O&G Co., nw 6-15-113, dr bel 2400 ft.

WASHAKIE—Dakota-Wyoming Oil Co., 6, ne 24-47-90w, small show at 200 ft to be cased off and dd. Ohio Oil Co., lot 14, sec 19-45-92, dr water well and mvg in materials.

MONTANA

BIG HORN—Continental Oil Co., 21-6s-35e, to dd from 3400 ft.

CASCADE—Andover Oil Co.'s Floweree 1, se 20-21-2w, sd 1405 ft. Lone Star Mont. Oil Co., McLean 1, se 13-21-3e, bldg rig.

CHOTEAU — Williston-Shelby O&G Co., Flack 1, se 12-28-11e, dr 2860 ft, hfw.

FERGUS—Northern States Oil Co.'s Woodward 1, se 20-14n-24e, dr bel 2043 ft. Melton Corp., 24-21n-17e, cas to 2800 ft. Pownal Oil Co., 24-19-11, spd.

GLACIER—Pulton Pete Corp.'s Blackfeet 1, ne 28-36n-12w, re-cem, td 1200 ft. B. & H. Oil Co.'s Haines 1, se 2-34-6w, sdtr lost pipe, td 2761 ft, oil show. Jeffries-Hoerr's Dawson 1, ne 7-31-12w, td 3050 ft, repair rig.

GOLDEN VALLEY—Texas-Pacific's 1, sw 21-8s-21e, dr 2400 ft.

JUDITH BASIN—Newton-Waddingham, se 15-16n-10e, dr bel 1110 ft.

LIBERTY—Northland O&G Co.'s Yurman 1, 32-33-5e, to res 3475 ft. Sunburst, McLaren 1, se 9-37-6e, sd 3115 ft. Utopia Oil Co.'s Eleanor Ass'n 1, sw 11-33-6e, to res 3190 ft. Perkins et al, Brown 1, nw 24-35-4e, spd 150 ft with spudder, now mvg in standard tools.

POWDER RIVER—Creel et al, 7-8s-50e, dr 1200 ft.

ROSEBUD—Prairie O&G Co.'s 1-X, 26-10-39e, dr gray shale at 2222 ft; Prairie's 1, Contract 4, 28-10-38, 12½inch lowered 1355 ft.

TETON—Andover Oil Co.'s Carlson 1, 5-24-4w, stand 150 ft.

TOOLE—Liquid Gold Oil Co.'s Roberts 1, ne 25-36-12, dr 1700 ft. International Royalty Holding Co.'s Henry 1, 26-35-36, sd 2590 ft, to abn in sulphur water. A-1 Petroleum Co., se 24-36-1e, dr 450 ft.

YELLOWSTONE—Peter Antonioli, 21-2n-25e, rigged.

COLORADO

ADAMS. — N. M. Slatt's 1, se 27-26-64w, ready to res at 2500 ft.

ARAPAHOE — McDebb Dr. Co.'s Fitzsimmons 1, 7-45-55, stand 5746 ft. Merrett et al's U. P. 1, nw 17-5-64, stand 1600 ft, hfw.

BACA—A. R. Jones Oil & Optg. Co., Boise Cattle 1, 22-34-42w, dr at 4431 ft.

EL PASO—Utemore Synd., Cannon 1, ne 10-16s-66w, stand 1100 ft.

HUERFANO—Parker Club, Fee 1, se 4-28s-68w, prep to res, td 4116 ft.

JEFFERSON—Ruby Hill O&G Co.'s Braden 1, se 24-4s-59w, show gas, dr 3830 ft.

LAS ANIMAS—Oklahoma Dr. Ass'n, Radcliffe 1, ne 28-28-52, sd 100 ft.

LA PLATA—McGarr Pete Co.'s Pinon Mesa 1, ne 34-33n-12, prep to spud. Klem Pete Corp.'s Olbert 1, se 9-25n-12w, stand 3100 ft. Murchison Oil Co., Doescher 1, nw 29-33n-13w, sd 1225 ft.

LINCOLN—Kelley Oil Co.'s State 1, 36-14n-57w, prep to res 3380 ft.

MOFFAT—Mtn. Fuel Supply's State 2, tract 37-12-100, dr 1770 ft. S. H. Keoughan et al's State 1, sw 16-4n-101w, sd 2950 ft.

MONTEZUMA—Haller et al's Haller 3, ne 33-36-14w, sd indef, at 902 ft.

MORGAN—Ind. Terr. Ilum. Oil Co.'s State 1, ne 16-1n-57w, dr 4080 ft.

PUEBLO—Kuykendall Oil Corp., Boescher 1, 7-22-66, sd indefinitely 1320 ft. Anchor Oil Co.'s Easley 1, sw 35-22s-67w, dr 550 ft.

PARK—So. Park Oil Co.'s Milligan 1, se 13-9s-76w, dr 1672 ft. So. Park O&G Co.'s Eache 1, ne 6-9s-76w, prep to res.

ROUTT—Ingersoll et al's Omholt 1, 29-4n-87w, sd 115 ft.

WELD—Eastman Oil Co.'s Steele 1, ne 14-2n-67, sd 165 ft.

WASHINGTON—Middlemist Oil Co.'s Middlemist 1, se 14-4-56, stand 1724 ft.

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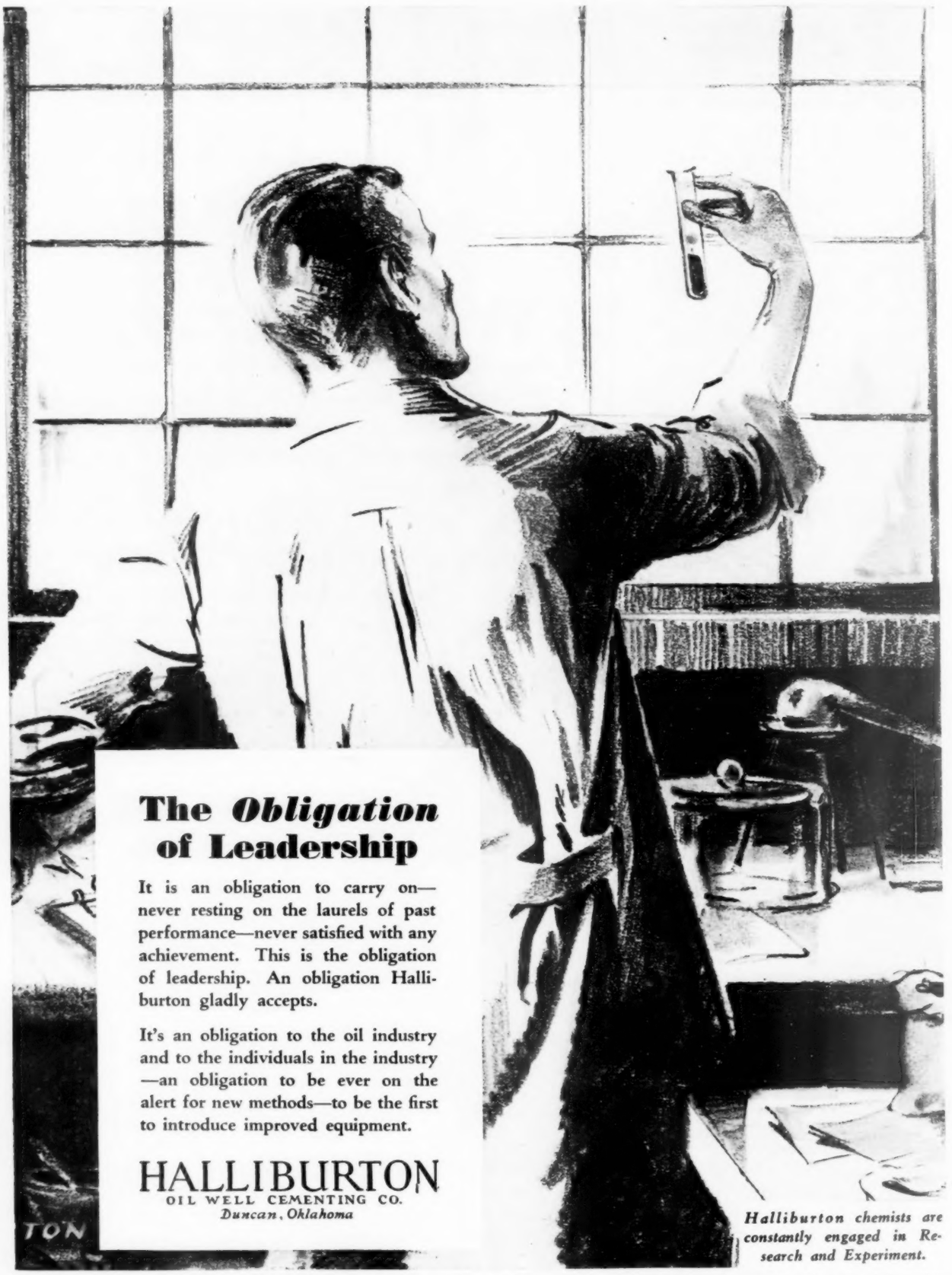

The *Obligation* of Leadership

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New Equipment for the Field

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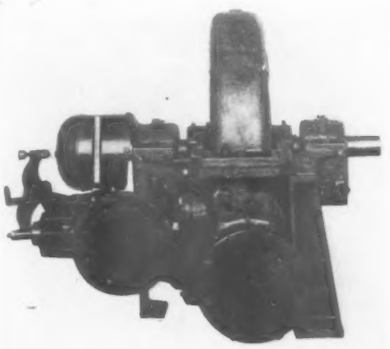
New Steam Turbine

General Electric Company

General Electric Company announces another new, small, mechanical-drive steam turbine, designated Type D-58, for driving fans, pumps, and similar industrial equipment. The new turbine is designed for operation at steam pressures up to 250 pounds and speeds between 1200 and 4000 r.p.m., with capacities up to approximately 250-horsepower and is built only as a single-stage machine.



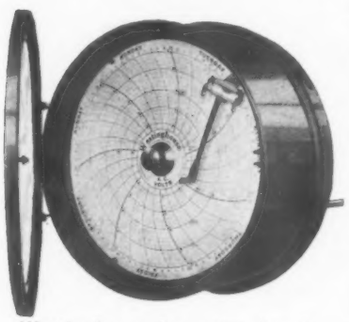
G-E Type D-58 Steam Turbine

By limiting the range of conditions under which this turbine will be expected to operate it has been possible to decrease the length and width, making it a very compact unit with a considerable saving in weight. The turbine is supported at the center line to permit expansion without affecting the shaft alignment. It is equipped with speed regulating and emergency governors and is fitted with carbon shaft packing. The pipe connections are made to the lower half of the turbine to facilitate opening for inspection.

Recording Chart

Westinghouse Electric & Manufacturing Company

Westinghouse Electric & Manufacturing Company, East Pittsburgh, announces a new circular chart recording instrument, which is shown here. The instruments are light and small and have ammeters and voltmeters, and are made for switchboard mounting or as portable instruments.



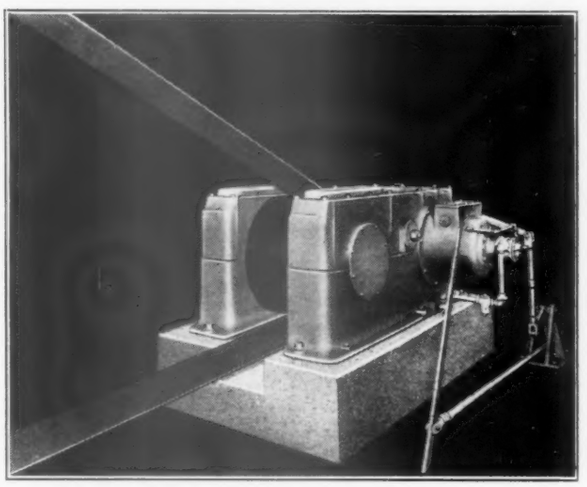
Westinghouse Recording Chart

An example of the utility of these instruments is their use for determining the most economical use of motor-driven machinery, the loading of motors, time of starting in mornings or after lunch hour, time of quitting, loss of time, and power required for different operations or depth of cuts.

They are designed principally for alternating current applications, but are also applicable to certain direct current services. The ammeters are available in sizes ranging from five to 50 amperes, and give a full-scale reading from zero to the value at which the meter is rated; the voltmeters are made in ratings varying from that which provides a scale of from 90 to 140 volts to that which records a maximum voltage of 550 volts.

This instrument uses for the measuring unit a small motor structure, in which a laminated armature core or "rotor" is mounted in the field of an electromagnet. The air gap surfaces of the pole pieces are arranged to give as uniform a scale as is consistent with good performance at light loads. The control force is provided by heavy springs. The main shaft operates the pen directly, and the mechanism as a whole is damped by means of an aluminum disk arranged to swing in the air gaps of a powerful set of permanent magnets.

Three kinds of clocks for moving the circular chart are provided; a key-wound, eight-day clock for driving the one-week charts; a key-wound, 36-hour clock for driving the one-day charts; and a subsynchronous (self-starting) motor-driven clock, operated by the system frequency. Change gears are available to change synchronous-driven meters to other speeds.



Cooper-Bessemer Speed Reducer

Speed Reducer

The Cooper-Bessemer Corporation

The Cooper-Bessemer Corporation, Mt. Vernon, Ohio, announces its Type GRF speed reducer which has a faster reverse than forward speed in any desired ratio up to two to one. This new unit transmits 60 horsepower at 250 r.p.m and 120 horsepower at 500 r.p.m. Its application is for bandwheel or rigfront work on deep wells.

The following special points were developed by its designers to qualify this unit for extreme depths, high speeds and heavy loads: Flexible coupling which offers to prevent

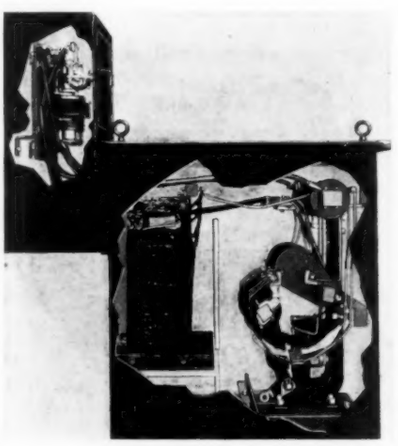
a transfer of vibrations between the engine and the clutch; oil-flooded mechanism to insure smooth engagement; automatic-adjusting facings; positive position in neutral, forward or reverse; high safety factor through the use of heavy-duty roller chains, and Timken roller bearings on the main and pulley shafts.

Cooper-Bessemer Corporation will furnish a more detailed outline of this new product upon request to the home office shown above.

Magnetic Controller

Electric Controller & Manufacturing Company

Electric Controller & Manufacturing Company, 2700 East 79th Street, Cleveland, Ohio, announces a new 2300 volt, full voltage magnetic starter, complete with overload relays and a self-contained potential transformer (to secure 220 volts for the control circuit) is intended for across-the-line starting of squirrel cage and synchronous motors and may also be used to control the primary of slipring motors. The starter is built for reversing, non-reversing and plugging applications.



Magnetic Controller

The design of this starter is radically different from the switchboard circuit breaker type of starter commonly used in the past for full voltage starting of high voltage A.C. motors. There are no bell cranks, toggle mechanisms or lever systems between the magnet armature and movable contact arm. The magnet armature, carrying the movable contact arm, is direct acting and is supported by only one large bearing pin and since the entire unit is totally oil-immersed, all working parts are always well lubricated and protected from dust and corrosion. This insures the equipment is ready for operation at any time, whether it is out of service for a few minutes or for several months.

The contacts used on this, the type ZHS full voltage magnetic starter, are likewise different from previous 2300 volt designs. They open and close the circuit with a wiping and rolling action, are duplicate and are easily renewable.

As illustrated, the enclosing case is a heavy welded steel tank, which houses the completely wired unit. A longer tank containing two type ZHS magnetic contactors, mounted back to back and mechanically interlocked, is supplied for reversing, non-reversing and plugging applications. This unit construction provides a flameproof, corrosionproof and dustproof installation that may be mounted anywhere with safety. It is not necessary to build an expensive control room for these starters. Frequently, it will prove very economical to mount them out in the plant alongside the motors they control, thereby permitting a very substantial saving in installation costs.

The type ZHS full voltage magnetic starters are available in two sizes, the No. 2 and No. 3 sizes, with maximum ratings of 600 hp. and 12 hp. respectively. These starters may be controlled from a type "M" master switch which can be arranged to provide low voltage release or low voltage protection. The starters may also be controlled from float switches, pressure regulators, altitude regulators and similar actuating devices.

The manufacturers will gladly furnish more detailed information on this new product upon request.

Ideco A-3 Pumping Unit

International Derrick & Equipment Company

International Derrick & Equipment Company, Columbus, Ohio, announces as its latest development the Ideco Type A-3 pumping unit, designed for use with gas or electric drive. It is a complete, self-contained pumping unit designed for use on wells up to 3000 feet in depth.

New Ideco Pumping Unit

This unit consists of a double reduction gear unit with double Helical (Herringbone type) continuous tooth gears, driven by a motor or single or multi-cylinder gas engine through "V" belt or silent chain drive; a crankshaft with twin 42-inch cranks; one on either side of the gear housing; and Ideco crank counterbalance for each crank; a double pitman; heavy duty roller pitman bearings; an "A" frame Samson post; a solid "I" beam type walking beam; and a mule head for straight lift pumping. All driving gears are completely enclosed and operate continuously in a bath of oil

The entire assembly is mounted as a unit upon a structural steel bed plate, and is built for installation upon the derrick floor or for mounting upon a concrete foundation. The unit is complete in itself and with exception of the motor or engine requires no additional equipment.

For further information write International Derrick & Equipment Company, Columbus, Ohio.

Rotary Pump

Tuthill Pump Company

Tuthill Pump Company, 131 West 63rd Street, Chicago, announces the Model L pump series, a new contribution to the solution of liquid movement and hydraulic power transmission problems.

Model L is a rotary pump of the internal gear, positive delivery type including the unique Tuthill Mechanical Seal. Six sizes are available, ranging in capacity from three g.p.h. to 180 g.p.h. Speeds up to 3600 r.p.m. are possible in the smaller pumps and up to 1800 r.p.m. in the larger sizes. Pressures up to 200 pounds per square inch can be developed in the larger pumps. These pumps may be

mounted above the level of the liquid to be pumped as they have a high suction lift.

Construction features include a mechanical seal to eliminate packing and prevent the possibility of overheated motors due to improper packing adjustments; mounting flexibility through a new standard design, primarily arranged for end mounting with optional bracket for users desiring foot type of mounting; upright ports to maintain "prime," and ground housing bore to maintain smaller clearances and higher pressures.

Model L pumps are designed for oil burning installations of various sizes, for hydraulic applications, etc.

Catalogs and prices are available upon request.

O-C-T Tubing Head

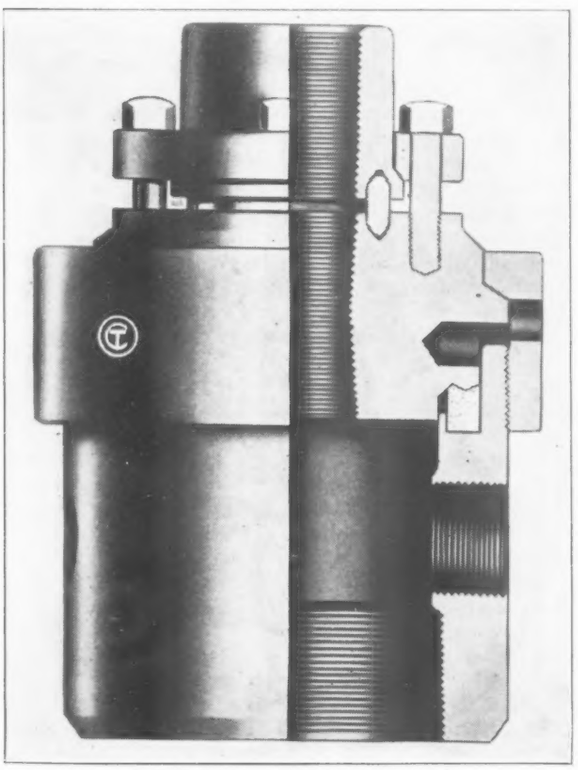
Oil Center Tool Company

Oil Center Tool Company, Inc., Houston, has announced the development and production of the O-C-T combination tubing head, tested to 3000 pounds, for use on flowing or pumping wells.

The design of the head is simple, with provision for tight, leak-proof joints. The top of the head is constructed so as to allow swivelling of complete Christmas Tree, permitting all threads to be made up tight and flow-lines to be run in any desired direction. When the tubing is pulled, it is only necessary to remove bolts from the swivel flange and lift the Christmas-Tree off. It is not necessary to disconnect a thread.

The joint of the swivel flange incorporates the same sealing principle as that in O-C-T "double-seal" forged steel flange unions. A soft steel ring tapered on each edge fits into grooves tapered to correspond. This gives two independent seats, and two seals. Either seal is built to hold the full pressure for which the head is designed.

O-C-T combination tubing heads are furnished for a 6⅝ inch O. D. and seven-inch O. D. closing with either three-inch or four-inch top connection.

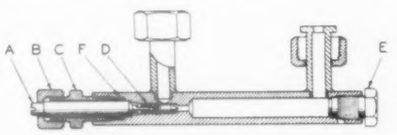


O-C-T Combination Tubing Head

New Damping U-Tube

Foxboro Company

The Foxboro Company, Foxboro, Massachusetts, announces the development and placing on the market the new damping U-tube for use on all of the company's new style flow meters and flow controllers. This U-tube may be adjusted for proper damping while the instrument is in operation. Pressure does not have to be shut off nor does the instrument have to be taken apart for adjusting.



Foxboro Damping U-Tube

A "screw-driver" is fitted to the end of the needle valve. By turning this device adjustments may be made without forcing the mercury out. Adjustments can be made very minute or very large as conditions warrant, the manufacturers state.

The new damping U-tube is not furnished as standard equipment and must be specified on orders of a new flow meter or flow controller. It is ready for use now on all Foxboro flow meters or flow controllers in use in the field except types T, C, A and B.

The company will furnish more complete information on this new product upon request.

New Vent Valve

Vapor Recovery Systems Company

Vapor Recovery Systems Company, Compton, California, announces a new conservation vent valve for oil tanks.

Frank V. Long, president of the company, describes this valve, which is known as the Varec breather valve, as being made of pure aluminum throughout and as incorporating the same features as the company's Toncan iron valve of high flow capacity. It is designed to eliminate wind-drift by utilizing a single passage way common to both vacuum and pressure relief. It is made of aluminum material in order to be applicable on tanks containing oil which gives off corrosive gases, on cracking plant run-down tanks, caustic tanks, and other tanks carrying corrosive elements.

Pure aluminum seats are installed in such a way as to permit easy replacement. The announcement states that, if desired, seats may be of lead, stainless steel or any other metal. Another object of the aluminum material, it is explained, is to give light weight to the valves.

Tests have been made showing the stream line design of the valve body and static balance valves results in a flow capacity of 98 per cent of an open nipple, and that it prevents chatter in the valve.

More detailed information on this vent valve is available upon request to the manufacturers.

Manufacturer and Supply Dealer Notes

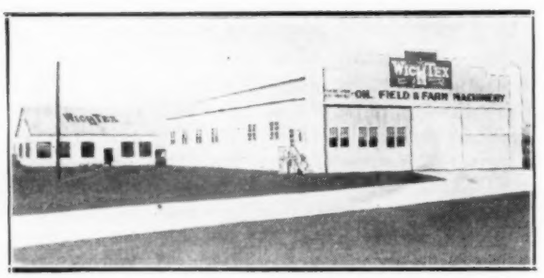
▼ ▼ ▼

McIntosh & Seymour Corporation, Auburn, New York, announces the election of R. B. McColl as president and a director of the corporation, succeeding A. E. Ballin, who retired, effective February 1.

Born in Kilmarnock, Scotland, in 1882, Mr. McColl spent practically all of his working career until the present time in the railway and locomotive industry, in England and Canada. After approximately 15 years experience in locomotive plants he became general manager of Armstrong Whitworth Company's locomotive department in England in 1919, in charge of the building and equipping of the locomotive works and of sales, engineering and manufacturing of locomotives. Shortly thereafter he was made general manager also of the pneumatic tool department, gas and oil engine department and also director of the works board of all Armstrong Whitworth Company's plants, which included shipbuilding and Diesel oil engines for marine work. In January, 1922, he joined the American Locomotive Company, which he had previously served, and became located at New York City. During the same year he was appointed assistant manager of the Schenectady plant, and in 1925 was made manager of that plant, where he served until his recent connection was made with McIntosh & Seymour Corporation.

Oakite Products Company, Inc., 22 Thames Street, New York City, will present in Booth No. 90 at the Oil Equipment and Engineering Exposition, Los Angeles, March, 16-23, economical salvaging and improved methods for cleaning serviced equipment and paint stripping practices. A miniature model producing plant and its related equipment in actual operation will be shown. The Oakite methods for cleaning interiors of tanks, for cleaning small parts, waste and wiping rags and painted surfaces will be shown. P. A. Boeck, west coast division manager, will be in charge of the Oakite booth, with other representatives, including G. H. Boeck, R. E. Craig, C. S. Rankin, M. L. Witt, W. W. Hotchkiss, C. E. Johnson, F. Lee, H. W. Graham, M. E. Bagley and G. N. Benoit.

New Factory of Wichtex Machinery Company



Wichtex Machinery Company has erected for the manufacture of oil field equipment, especially oil field winches and spudding machines, a new plant in Wichita Falls, Texas. W. J. Edwards is manager of the company which has been only recently organized by business and oil men of Wichita Falls and North Texas. The company already is in production.

Byron Jackson Company, Berkeley, California, announces that, effective February 1, its Eastern office is located at Bethlehem, Pennsylvania, instead of 1245 Graybar building, New York City, as heretofore. While sales offices will be maintained in New York City, correspondence for the eastern division of the company should be addressed to P. O. Box 409, Bethlehem, according to the announcement.

Lukenweld, Inc., a division of Lukens Steel Company, Coatesville, Pennsylvania, has published a 20-page, illustrated bulletin devoted to Lukenweld construction. Examples of Lukenweld construction are given in photographs reproduced in these pages, and the complete story of Lukenweld construction as concerns the manufacturer, is told. The advantages of rolled steel for modern machinery parts is taken up and discussed, Lukenweld development and research service is outlined, and the various phases of construction in the company's routine operation is described in description and pictures.

Hazard Wire Rope Company, Wilkes-Barre, Pennsylvania, announces "Korodless," the new chrome nickel alloy wire rope now being manufactured by the company. This new rope has been made from stainless steel with the idea of preventing the attack of salt water or salt air, and to prevent corrosion. The company has published a three-color folder describing and illustrating this new wire rope, and will send a copy to interested operators upon request.

The Lummus Company, a new engineering and contracting firm having authorized capital stock of $10,000,000, has been organized to take over the business of Walter E. Lummus Company of Boston. The Superheater Company and Babcock & Wilcox Company hold substantial blocks of stock in the new firm.

The Lummus company will engage in the design and manufacture of distillation and refining equipment for the alcohol, chemical, and petroleum industries, thus following the lines of activity pursued by Walter E. Lummus Company, but operating on a larger scale.

The facilities and experience of The Superheater Company and Babcock & Wilcox Company combined with those of the Lummus organization will, it is claimed by Walter E. Lummus, president of the new company, provide a well rounded and scientific organization.

Walter E. Lummus Company of Boston is an organization known in the distillation field for 30 years. The Superheater Company has extensive manufacturing plants at East Chicago and Sherbrooke and Quebec, and has built heat transfer equipment for the refining field, particularly in the form of tubular heaters. The Babcock & Wilcox Company was incorporated in 1881, and manufactures water tube steam boilers for stationary and marine service. The company also manufactures stokers, economizers, oil burners and other power plant auxiliaries. Babcock & Wilcox works are located at Bayonne, New Jersey, Barberton, Ohio, East Liverpool, Ohio, and Augusta, Georgia. A subsidiary company operates a tube mill at Beaver Falls, Pennsylvania.

Walter E. Lummus is president and treasurer of the company and Raymond R. Collins is vice president and secretary. Directors, aside from these two men, include George L. Bourne, F. J. Faulks, F. A. Schaff, C. W. Middleton and A. G. Pratt.

▼ MANUFACTURER AND SUPPLY DEALER NOTES ▼

Gearench Manufacturing Company, 313-323 Hughes Street, Houston, has recently published an illustrated loose-leaf catalog, covering Petol tools, including tubing tongs, pipe tongs, chain tongs, friction tongs, carrying tongs, back-up tongs, rotary tongs, casing tongs and pipe wrenches. The manufacturers state that this is the most complete line of tongs in the world. The catalog is divided into sections, with one section devoted to individual tools. The leading illustrations carried are showing demonstrations of the working of the tools. Sizes, weight and prices are covered in this catalog, a copy of which is available to interested operators upon request to the above address.

American Chain Company, Inc., announces that group life insurance amounting to $663,000 is provided for employees of Highland Iron and Steel Company, a subsidiary at Terre Haute, Indiana, under a contract between the parent company and Equitable Life Assurance Society. This contract is in addition to one that originated in 1921, under which 4300 employees of American Chain Company and its other subsidiaries, a leading organization in the manufacture of chains, tools, machinery, and wire products, have been covered with group life insurance approximating $3,605,000.

Caterpillar Tractor Company announces that Charles A. Spears, recently promoted from district representative on the Pacific Coast to general supervisor of construction and governmental sales, has selected his staff of engineers to work on these problems. Their knowledge and experience is available to contractors, engineers and governmental officials throughout the domestic field.

Reading left to right, they are: R. H. Gardner, for two

Caterpillar Tractor Engineers

years district representative in the Southeastern territory for the company; Walter Harn, a district representative in Arizona and Southern California for two years and now located on the West Coast to cover the territory west of the Rockies for Mr. Spears' staff; C. A. Spears, former head of Spears-Wells, manufacturers of road machinery, has done construction engineering in the West for 15 years; Ralph J. Morgan, who for three years has been district representative for the company in the Southern district; and Frank A. Nikirk, who has been for four years on the engineering staff of the company on the Pacific Coast. All of these men are graduate engineers.

"THE STRONGEST GEARED POWER FOR ITS WEIGHT IN THE WORLD"

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ALL STEEL HAND HOIST
SEATTLE, U.S.A.
TRADE MARK REGISTERED

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PRICE $80

Steel Tail Hold Yoke $4 extra. Truck attachment plate $10 extra.

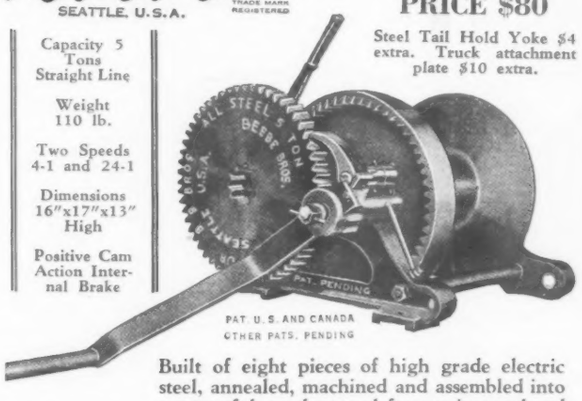
Capacity 5 Tons Straight Line

Weight 110 lb.

Two Speeds 4-1 and 24-1

Dimensions 16"x17"x13" High

Positive Cam Action Internal Brake



Built of eight pieces of high grade electric steel, annealed, machined and assembled into a powerful, modern tool for use in any hand hoisting, lowering or pulling. Quickly set up and easy to operate. Positive brake control.

Make this sturdy little worker a part of your regular equipment. It will handle innumerable jobs with a saving in both time and labor.

For Sale by

THE NATIONAL SUPPLY COMPANIES

OPERATION that keeps earning profits

LAYNE WATER WELLS and LAYNE INSTALLATIONS never show on the red side of the ledger—in every instance they represent a saving, in many instances consistent earnings for every dollar invested.

LAYNE SYSTEMS are economical in operation cost, free from upkeep expense and posses the ability to serve—all true yardsticks of pumping economy.

There's a Local Layne Engineer in your territory! Write Him today.

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Rio De Janeiro
Saigon, Indo-China
South Bend
Stuttgart
Toronto, Canada
Torreon, Mexico

Squeaks From the Bull Wheel

▼ ▼ ▼

Si: "I hear ye've give up terbaccy, Ezry."

Ezry: "Well, Si, I.m sorta taperin' off; I don't swaller the juice no more."

"Did you say your girl's legs were without equal?"

"No; I said they knew no parallel."

Contributor: "What did you do with my poem about the little birdies?"

Editor: "I put it in a pigeon hole."

Mrs. Newrich had just arrived from a tour of Europe, and her long-suffering acquaintances had no opportunity to forget the fact.

"And Paris!" she gushed. "Paris is just wonderful! The people are all so well-educated—not at all like they are in this crude country, my dear! Why, even the street cleaners talk French!"

"Poor old Bill! 'E's so short sighted 'e's working himself to death."

"What's 'is short sight got to do with it?"

"Well, 'e can't see when the boss ain't looking, so's 'e 'as to keep shovelling all the time."

A man suffering from an excess of stimulant and tottering perceptibly, arrived home as the clock was striking three.

After carefully removing his shoes, he tiptoed softly to his door.

He slipped the key in and was half way down the hall when he upset the goldfish bowl, causing it to fall with a mighty crash.

His wife, hearing the commotion, appeared at the head of the stairs and called sharply:

"John! What on earth are you doing?"

"I'll teach these blooming goldfish to snap at me," replied John.

"What became of that silk smoking jacket that you gave your husband for Christmas?"

"Oh, I had to take it away and make it into cushion covers. He actually wanted to sit and smoke in it."

Miss Suds: I wonder if I shall lose my looks, too, when I get to be your age.

Miss Tubbs: You will be fortunate if you do.

For years the two sexes raced for supremacy—now they've settled down to neck and neck.

A girl met an old flame, and decided to high hat him. "Sorry," she murmured, when the hostess introduced him to her. "I didn't get your name." "I know you didn't," replied the old flame, "but that is not your fault. You tried hard enough."

Dorothy (aged four): "Please, God, make it stop raining so's we can go to the party tomorrow."

Mary (aged six): "Please, God, don't take any notice of her. Make it rain so's mummy'll have to take us in a taxi."

Sambo—"Look heah, woman! You know you done marry me jus' for mah guv'ment insurance!"

Liza—"Ah knows dat, honey, but ain't Ah been willin' to let you die a natural death?"

Policeman (to motorist who nearly collided): "Don't you know that you should always give half of the road to a woman driver?"

Motorist: "I always do, when I find out which half of the road she wants."

Yvonne: "He wore my photograph over his heart and it stopped the bullets."

Anatol: "I'm not surprised. It would stop a clock.

Father (to his bright son): "What's wrong?"

Son (10 years old): "I've had a terrible scene with your wife."

"So he's your little brother? Funny you are so fair and he is so dark."

"Yes, but he was born after mother dyed her hair."

"I see by the paper they are going to have a chaperon at the dance tonight," giggled Miss Nino Clock. "Won't that be heavenly? I've always wanted to hear one and I'm getting so tired of saxophones."

Arriving home from the party, Friend Wife took her hat and slammed it on the floor. "I'll never take you to another party as long as I live," she said.

"Why?" asked Hubby, amazedly.

"You asked Mrs. Jones how her husband was standing the heat."

"Well, what of that?"

"Why, her husband has been dead two months."

IN THE RACE TO REACH PAY SAND
THE
APPLEMAN GUMBO BIT
HOLDS THE ADVANTAGE

The speed features of this bit have made for it a reputation in all oil fields. It insures greater profits to the operator

Because . . .

Choking up is obviated, water courses leading directly to the cutting edge assuring the quick washing away of all cuttings in solution.

The blades are self-sharpening, achieved by concave formation and hard facing, permitting wear on the back of the blade to retain the cutting edge.

It holds gauge longer and cuts the sidewall as it drills, thus accomplishing a full round hole and a well prepared sidewall.

B.K. APPLEMAN
BEAUMONT, TEXAS

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TUBES TO MEET EVERY OIL FIELD NEED

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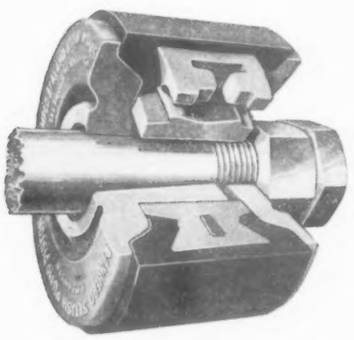
BOILER TUBES

Ramhead
SLUSH PUMP PISTONS



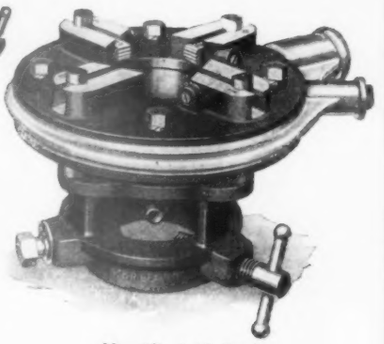
Sold on Trial to Responsible Operators

We want you to test Ramhead Slush Pump Pistons for yourself, under your own conditions. Order a set on trial . . . put them to work . . . convince yourself that with Ramheads there is less friction and less slippage, that your piston expense and servicing is reduced to an absolute minimum.

Alamo Iron Works
SAN ANTONIO TEXAS

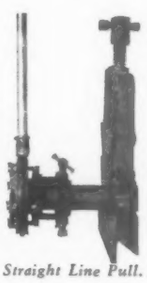
Patented Self-Contained Rear-End.

A Husky Man's Size Grip Screw.



No. 8R, 1-2" Ratchet

Grooved Bolt and Washer.



Straight Line Pull.

Extra Heavy Upright Posts.

Simple, Sturdy Ratchet Pawl.

A Reminder!

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When You Buy 1-2" Die Stocks

1. *Patented Self-Contained Rear-End.* Centers the pipe accurately—and without pliers or wrench. Simple, convenient, rapid, rugged, and accurate. Quickly and easily set to cut drip threads—also close nipples.
2. *A Husky Man's Size Grip Screw,* with sliding handle—easy to tighten by hand.
3. *Grooved Bolt and Washer.* Hardened steel washers that fall into the "size grooves" quickly and accurately locate the rugged guide bolts in position. No loose bushings to get lost.
4. *Straight Line Pull.* The Ratchet is on the die head—hence the pull is directly over dies—thus eliminating binding, or cocking which damages threads and wears dies and parts prematurely.
5. *Extra Heavy Upright Posts* mean greater strength, durability, rigidity, smoother operation, less trouble and repair expense. A standard mark near the top of each post enables you to cut standard, over or under as desired.
6. *Simple, Sturdy Ratchet Pawl* that stands lots of punishment yet is easily and quickly repaired on the job if ever necessary.
7. *Open Die Slots for Easy Cleaning.* You can't keep dirt, grease or chips out of die slots—back of the dies—thus ruining threads but a wiping cloth cleans these open dies slots in a jiffy.
8. *Safe, Enclosed Die Retaining Device.* Fully enclosed. No exposed spring to get knocked off. Dies don't fall out. You save the cost of many sets of lost dies.
9. *Light in Weight.* While the vital wearing parts are of heavy rugged construction, extreme simplicity of the tool results in lightness of weight—only 12¾ lbs. in the ratchet tool—(10 lbs. in the plain tool) as against 16 lbs. for other standard four post ratchet tools.
10. *Beaver Die Segments are Interchangeable.* Odd segments can be kept and used to "piece out" complete sets. A special "Beaver" feature and a big saving to you.
11. Dies interchangeable with other 4-post tools.
12. Low in price.

Try a No. 8 Plain or No. 8-R Ratchet—and see why so many leading shops are standardizing on the new "four-post" Beavers. Sold by leading supply houses.

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THE BORDEN CO.
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Open Die Slots for Easy Cleaning.

Safe, Enclosed Die Retaining Device.

Light in Weight.

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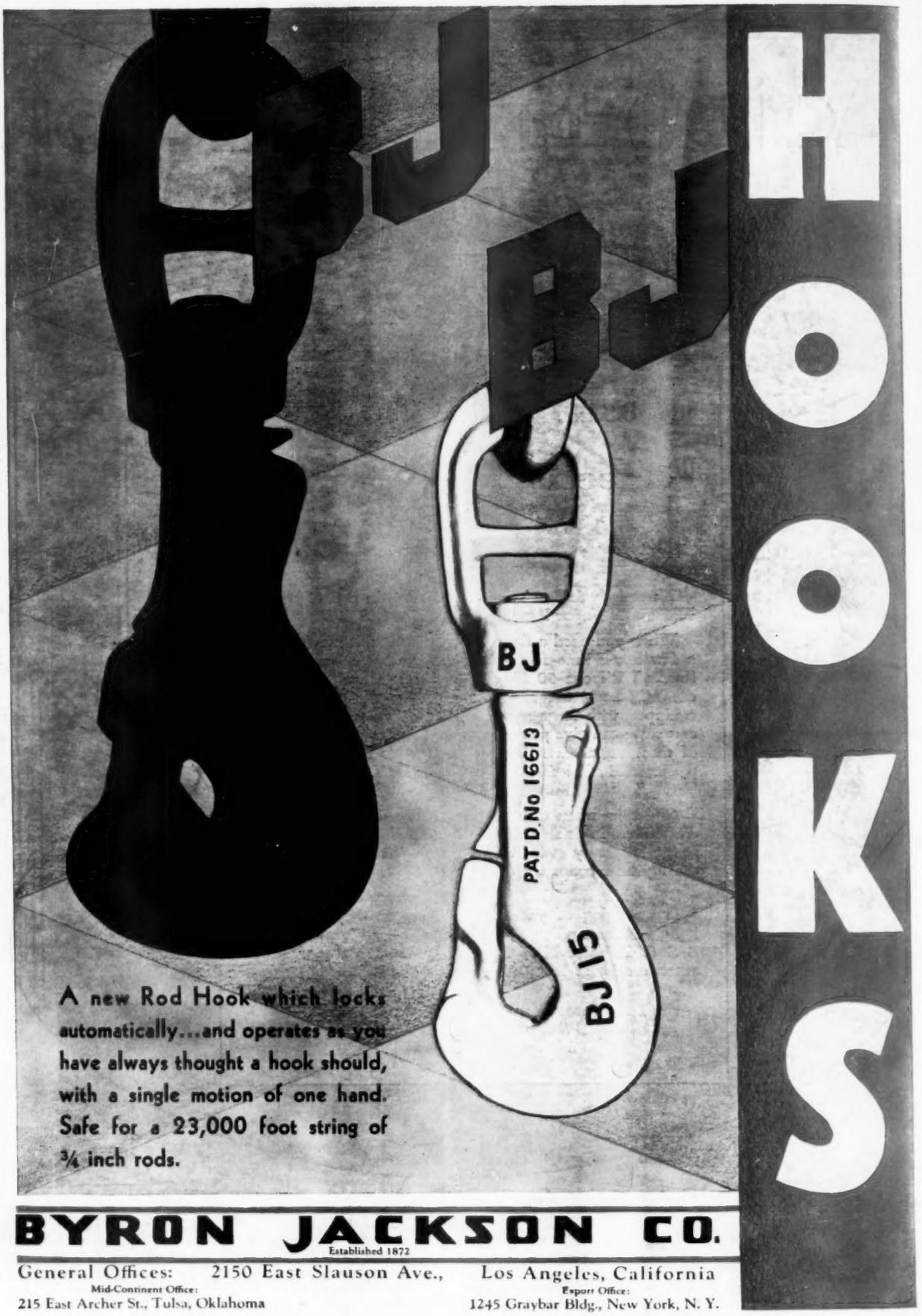
Black Sivalls & Bryson INC.

BARTLESVILLE ~ OKLAHOMA

PRODUCTS B S & B SERVICE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